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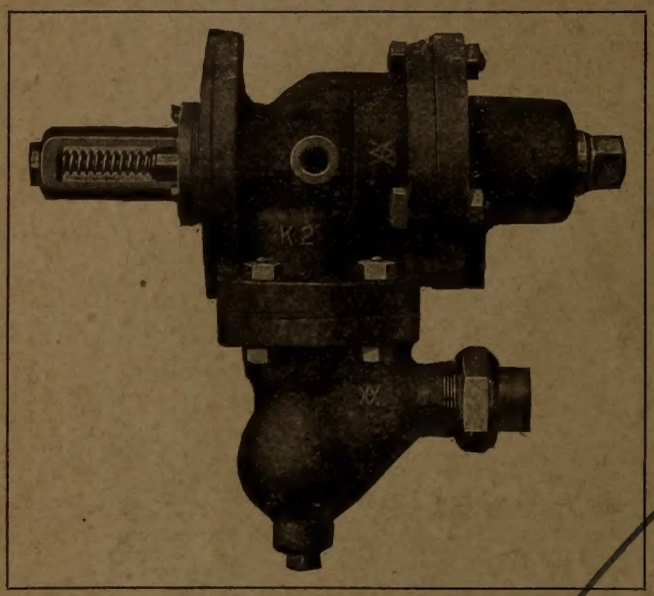

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See Purchasing Agents' Guide on page 69

See Alphabetical Index to Advertisements on page 37.

THE

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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Algoma Central and Hudson Bay Ry.—There has been completed a branch, known as the Loon Lake branch, from mileage 23.75, the objective point being the Breitung iron mine at Loon Lake. The branch has a length of 7,600 ft.; there are no bridges, the maximum gradient is 3%, and the maximum curvature 9°. The work was very light, and the branch is in operation. The work was done by the company's own staff.

No work was done in the way of extension on the main line during the past year, the question of the further construction from mileage 70 to mileage 173, the proposed junction with the Michipicoten branch, still being undecided. (Aug., 1906, pg. 449.)

The Atlantic, Quebec and Western Ry. Co. is applying at the current session of the Dominion Parliament for an act authorizing it to acquire by private or judicial sale the Atlantic and Lake Superior Ry., and Baie des Chaleurs Ry., between Matapedia and Paspebiac, or any other railway; to purchase the bonds, common stock, judgments and claims affecting the said railways; to alter or deviate the lines, and to construct a line from Paspebiac, Que., to Edmundston, or Grand Falls, N.B., and to connect with the National Transcontinental Ry., or any other railway; to increase its power of issuing bonds or other securities to the extent of $50,000 a mile, and for other purposes. The notice of application is signed by J. X. Lavoie, President of the Canadian Board of Directors, and E. Brassard, Secretary.

Barrie and Orillia Ry.—The Dominion Parliament is being asked at its current session for an act incorporating a company with this title to construct a railway from or near Grenfel or Midhurst, on the C.P.R., to near Barrie; a line from Barrie to Orillia, with branch line to Penetanguishene and Brechin; also from Barrie to Newmarket or Aurora, Ont., with power to construct docks, operate steamers, and make arrangements with other companies. W. A. Boys, Barrie, Ont., is solicitor for the applicants.

Burrard-Westminster Boundary Ry. and Navigation Co.—Application is being made at the current session of the Dominion Parliament for an act incorporating a company with this title for the purpose of constructing railways of any gauge, to be operated by steam, electricity or any other motive power, between the following points: From the north side of False Creek, crossing False Creek by a bridge, southeasterly through Vancouver, Hastings townsite, South Vancouver, Barnby and New Westminster to the Fraser River bridge, thence northeasterly through New Westminster, Coquitlam and Port Moody, westerly to or near the proposed location of the Vancouver, Westminster and Yukon Ry. bridge at the Second Narrows of Burrard Inlet, continuing westerly through Hastings tp. to the place of commencement in Vancouver; from the south end of the proposed V., W. and Y.

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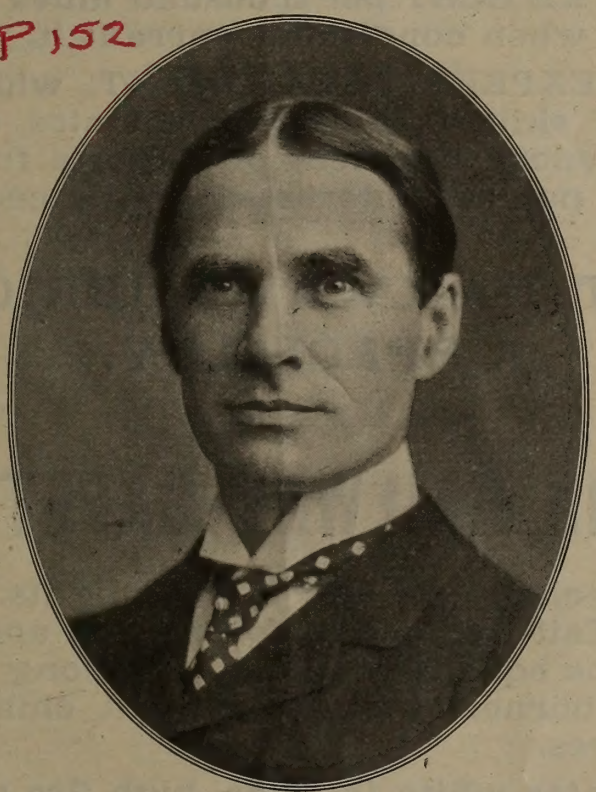

W. B. BULLING,
Assistant Freight Traffic Manager, Eastern Lines, Canadian Pacific Railway.

Ry. bridge at the Second Narrows, across the bridge to North Vancouver, and to the north arm of Burrard Inlet; from the north end of Fraser River bridge, across the bridge (with the consent of the Provincial Government, which will be applied for), thence southerly to the International boundary between Semiamo bay and Sumas; from the south side of False Creek westerly through Vancouver and South Vancouver to Point Grey, thence returning in a southeasterly direction by the most feasible direction to the north end of Fraser River bridge; from Port Moody easterly to Dewdney trunk road, thence following the trunk road through Coquitlam, Maple, Ridge and Mission municipalities to Stave River and the east boundary of Mission municipality. Power is asked for the purpose of constructing branch lines, developing electrical energy, supplying heat, light and power to the public, and for manufacturing purposes; constructing telegraph and telephone lines, carrying on a general navigation business, and making agreements with other companies in connection with any or all of the objects named. Tupper and Griffin, Vancouver, B.C., are solicitors for the promoters.

Central Ontario Ry.—The construction of the line northerly from the present terminus at Bird's Creek to the Ottawa Division of the G.T.R. (the old Canada Atlantic Ry.) is being proceeded with. The contractor is W. G. Gibson, Bancroft, Ont. (Aug., 1906. pg. 451.)

Colchester Coal and Ry. Co.—The officers and directors are: President, S. Winter, Moncton, N.B.; Vice-President, Hon. F. A. Laurence, Truro, N.S.; Secretary-Treasurer, Dr. Jos. Hayes, Parrsboro, N.S.; other directors: B. H. Dodge, Kentville, N.S.; J. Strachan, Halifax, N.S.; L. G. Harris, Canning, N.S.; J. Fleming, Waverley, N.S. The company is constructing a railway from Debert station, N.S., on the Intercolonial Ry., to Debert mines, about four miles, which it is expected to have completed by June 1, 1907. E. S. Matheson is Chief Engineer, and the contractors are A. and W. D. Wheaton. The first two miles of the line is through a level country, but the second two miles is through a rough, heavy timbered district, with considerable rock cutting. The company is developing a 4 ft. seam of coal at the mines, and expects to begin shipping as soon as the line is opened. (Dec., 1906, pg. 711.)

Dominion Atlantic Ry.—A line two miles long is under construction, to be known as the Torbrook Iron Ore branch, extending from Leckie's shaft to Wheelocks. The work is being done by the D. A. Ry. staff.

Duluth, Rainy Lake and Winnipeg Ry.—It is reported that all grading of swamps on the located route between the present track end and the Rainy River, opposite Fort Frances, Ont., has been completed, and that with but a few short stretches the whole of the right of way has been cut out. There are several long strips of land upon which very little work is necessary, and the only heavy work on the line is half a mile of cutting through a granite ledge near Pelican Lake. In a map issued recently by the Canadian Northern Ry. the D., W. and R. L. Ry. is shown as one of its lines under construction. Whether this is the exact situation or not, the line will undoubtedly be operated in connection with the C.N. Ry., as the connecting bridge over the Rainy River is being constructed by a company in which the C.N. Ry. and the Cook

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PRESIDENT.

Lumber Co., the original promoters of the Duluth, Virginia and Rainy Lake Ry. are jointly interested. (Dec., 1906, pg. 711.)

Great Northern Ry., U.S.—F. E. Ward, of the G.N.R., on a recent visit to New Westminster, B.C., stated that plans had been prepared for a new station for that city, and that construction would be started as soon as a suitable site could be obtained. Local reports state that the company has purchased land on Front St., for the purpose of building the station. (Dec., 1906, pg. 713.)

Edmonton, Dunvegan and B.C. Ry.—The applicants applying at the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Edmonton, Alta., to Fort George, via Dunvegan and the Parsnip River, are: J. D. MacDonald, Winnipeg; J. A. Sandgreen, Edmonton, Alta.; C. Pringle, Ottawa; D. McLeod, T. G. Gallagher, Spokane, Wash. (Dec., 1906, pg. 713.)

Fort William, Ont.—The Town Council of Fort William, Ont., will apply next session of the Ontario Legislature for an act authorizing it to build one or more bridges over the Kaministikwia, Mission and McKellar Rivers, suitable for railway, highway and all other traffic, with a right to lease any portion to any person or corporation upon such terms as the corporation may see fit; to charge tolls for the use of the same, and to empower the corporation, with the assent of the ratepayers, to issue debentures for the cost thereof payable within 40 years.

Halifax and Southwestern Ry.—A telegram was received by the Premier of Nova Scotia, Dec. 14, stating that the last rail had been laid upon this line at Barrington Passage, N.S. It was expected that the ballasting would be pushed forward, and a train service put in operation early in the year. (Nov., 1906, pg. 641.)

Hamilton and Guelph Junction Ry.—Local reports state that the proposal to construct a line from Hamilton to Guelph Junction, Ont., in the interests of the C.P.R., has been abandoned for the present. (Aug., 1906, pg. 453.)

Hampton and St. Martins Ry.—We are advised by H. E. Foster, St. John, N.B., President, that a survey has been made from the present terminus at St. Martins to Quaco Harbor, N.B. The company's line has recently been sold under foreclosure of mortgage and the purchasers are reorganizing the company.

Intercolonial Ry.—Owing to difficulties in the way of obtaining the necessary structural steel for the new shops at Moncton, N.B., the contractor, E. A. Walberg, has been granted an extension of time for completing the work. The foundations of three of the shops have been completed, the walls of the first shop are up, and the steel columns and roof trusses are well advanced, whilst a good deal of other work has been done. As much work as possible will be done during the winter, and every preparation possible will be made so as to prevent any delay in going on with the work in the spring.

The specification of the group of buildings to be known as the locomotive shops at Moncton, show that the main building will be 408 by 176 ft., with three extensions at right angles with the main building. The first extension is 100 by 375 ft., the second 80 by 375 ft., and the third 75 by 375 ft. The building will include a boiler shop, a smith shop, an engine erecting ship, a boiler erecting shop, a general machine shop and two bolt and brass working extensions and a riveting tower. The different buildings are expected to be completed by Aug. 31. (Dec., 1906, pg. 713.)

A proposal is reported to be under consideration for the development of the water power on the Petitcodiac River at Moncton, N.B., for the purpose of generating electricity for use at the new shops.

The tender of M. E. Keefe, Halifax, N.S., has been accepted for the construction of the new roundhouse at Halifax, N.S. The contract price is $122,373.

International Ry. of New Brunswick.—Track has been laid to mileage 32 from Campbellton, N.B., an additional 11 miles having been laid and completed during 1906. The line between mileage 33 and mileage 38 is practically completed, and engineers are in the field finishing up the surveys as far as St. Leonards. It is expected to have contracts let for the balance of the line, about 70 miles, early in the spring. T. Malcolm, Campbellton, N.B., is the general contractor. (Aug., 1906, pg. 453.)

The Klondike Mines Ry. has been completed from Dawson to the Dome, 25 miles, and a train service has been placed in operation. It is expected to proceed during the coming season with the extension of the line to the Stewart River district, a further distance of 50 miles. (Dec., 1906, pg. 713.)

Manitoulin and South Shore Ry.—No new construction was done during 1906. The proposal to construct a line from Gertrude, mileage 15, to Little Current, Ont., 66 miles, is still under consideration. (Aug., 1906, pg. 455.)

Malone and Hopkins Point Ry.—W. F. Wenwright, Malone, N.Y.; J. Taillon, Dundee, Que.; D'Arcy Scott, W. H. Curle, Ottawa, Ont., are applying at the current session of the Dominion Legislature for an act incorporating a company with this title, for the purpose of constructing a railway from Dundee, on the International boundary, to Hopkins Point, Huntingdon, County, Que.

Matane and Gaspe Ry.—The plans for the first section of the line have been prepared and have been deposited with the Department of Railways. The length of the section is 32 miles, and extends from Matane, Que., easterly. The estimated quantities, etc., for this section shows: fencing, 32 miles; clearing, 150 acres; close cutting and grubbing, 13 acres; telegraph line, 32 miles; earth and rock work, 430,142 cubic yards; six bridges; 17 culverts; 2,049 lineal ft. culvert pipe; 14 crossings of public roads and 259 farm crossings; 83,840 ties; 80,000 cubic yards of ballast, with rails and fastenings. Five station buildings and two points of water supply will be provided. Following are the directors for the current year elected at the annual meeting held at St. Flavie, Dec. 10: Dr. J. A. Ross, M.P.; Senator Choquette, R. G. F. Dubord, J. F. Begin, A. Fortin, L. J. Le Vasseur, C. A. Gauvreau, M.P.; Dr. Caron, M.L.A.; Rev. A. A. Soucy. A meeting of directors was called for Dec. 14, for the purpose of considering a contract for the construction of the first section of the line from St. Flavie to Matane, Que. (Oct., 1906, pg. 583.)

Midland Ry. of Manitoba.—The last rail upon the line from the International boundary into Portage la Prairie, Man., was laid in that town Nov. 29. A temporary station is being constructed by Kenrick & Co., St. Paul, Minn. (Dec., 1906, pg. 713.)

Midway and Vernon Ry.—We have been advised that while there have been some negotiations with the Canadian White Co. respecting a contract for the construction of this line, the matter has not reached the stage when anything definite can be said. (Dec., 1906, pg. 713.)

Milton and Liverpool Ry.—Tenders are under consideration for grading the new work and relaying and ballasting the track for the whole line from Liverpool, N.S., to the pulp mills, a distance of about five miles. R. Gardner is Secretary of the company, and the tenders were received at the office of the Provincial Engineer, Halifax, N.S.

Minnesota and International Ry.—Surveys are reported to have been completed for the extension of this line, which is controlled by the Northern Pacific Ry., from the present terminus at Ripple, Minn., to International Falls on the Rainy River. It is also reported that a contract for the grading has been let, and that the contractor reports that construction will be easy. The M. and I. Ry. starts at Brainerd and runs northwesterly to Bemidji, thence northeasterly to Northome, from whence the extension to Ripple was completed in 1906 under the charter of the Big Fork and Northern Ry.

Napierville Junction Ry.—Tracklaying has been completed upon the line from the International boundary at Lacolle to St. Constant, Que., on the C.P.R. The line passes through Napierville and St. Edouard, and is 27 miles long. The Pacific Construction Co., Ottawa, had the general contract, and A. H. N. Bruce was Chief Engineer. (See Delaware and Hudson Rd., Nov., 1906, pg. 639.)

New Brunswick Coal and Ry. Co.—The work of ballasting the track and making all safe for the winter traffic has been completed by Manager Hunter, under the direction of the Commissioners appointed by the New Brunswick Legislature to repair and operate the line. The work of improvements will be resumed early in the spring. (Dec., 1906, pg. 713.)

Newfoundland-Canada Tunnel.—A Montreal despatch states that a charter has been secured to construct a 10-mile tunnel under the Strait of Belle Isle, to connect Canada and Newfoundland. The franchise allows 20 years for the construction of the tunnel and the connecting railways, and it is provided that the Government of Newfoundland will contribute $75,000 a year towards the cost of the tunnel. The franchise to which the despatch refers is probably a provisional contract with the Newfoundland Government, as the colonial Legislature has not had any such contract submitted to it for approval. There is no charter for such a work on the Canadian side, but persons interested in the Quebec and Lake St. John Ry. have been discussing the possibilities of constructing such a tunnel. (Nov., 1906, pg. 639.)

New York-Canadian Pacific Ry.—A company having its offices at Albany, N.Y., has been incorporated with this title for the purpose of constructing a railway from New York City to Schenectady, and thence to Ogdensburg, N.Y., on the St. Lawrence River, opposite Prescott, Ont., a distance of about 330 miles. Following are the officers and directors: President, V. Colvin, Albany, N.Y.; Treasurer, G. C. VanTuyl, jr., Albany, N.Y; other directors: W. H. Brown, Albany, N.Y.; J. McEnroe, Schenectady, N.Y.; P. H. Flagler, Clarksville, N.Y.; E. A. Jones, Jas. Francis, L. E. Carman, New York City; K. K. McLaren, Jersey City, N.J.; Secretary and Assistant Treasurer, M. Blake, Albany, N.Y.

Niagara Frontier Bridge Co.—The Dominion Parliament is being asked at its current session for an act incorporating a company with this title to construct a railway and highway bridge over the Niagara River from either Stamford or Niagara township or at the boundary line between the two townships, to a point between the south line of lot 32 and the north line of lot 24 of the New York State Mile reservation. Power is asked to collect tolls for the use of the bridge. The applicants are: J. P. Murray, A. E. Osler, Toronto; W. E.

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Phin, Welland, Ont.; F. A. Hilton, Buffalo, N.Y.; W. C. Burlson, E. H. Taylor, and B. Van Horne, Niagara Falls, N.Y.

The Northern Coal and Coke Co. has been incorporated under the Dominion Companies' Acts, with a capital of $1,000,000 and offices at Winnipeg, to carry on the business of coal mining, the manufacture and sale of patent fuel, lumber, etc.; to develop water powers and sell electric power; to construct irrigation works; to construct and operate electric and steam railways and tramways, etc. The provisional directors are: J. S. Hough, A. C. Ferguson, C. Williams, E. B. Lindsay, and W. G. Graham, Winnipeg, but they are merely nominal. The same persons are also provisional directors of the Western Canada Development Co., the incorporation of which has also been announced under the Dominion Companies' Act. This company has an authorized capital of $2,000,000 and its object is to search for coal, natural gas, and other minerals; to develop anv discoveries, and generally to develop the resources of the country.

Orford Mountain Ry.—Track has been laid on the extension from Potton Springs to Maisonville, Que., 7 miles, but the extension has not been placed in operation. It is proposed to extend the line from Maisonville, Que., to North Troy, at the International boundary, 4 miles. (Nov., 1906, pg. 641.)

Owen Sound Bridge and Terminal Co.—The Dominion Parliament is being asked at the current session for an act incorporating a company with this title for the purpose or constructing a bridge for pedestrian and general traffic; to lay tracks on the bridge and provide terminals; to construct a railway from the east side of Owen Sound, Ont., across the bridge to a connection with the C.P.R., the G.T.R., and the Huron and Ontario Ry., or any of them, or with any other railway authorized to construct a railway in or near Owen Sound, with power to construct branch lines not to exceed six miles in length in any one case. The company also desires to have power to own and operate steam and other vessels, on Owen Sound Bay, Georgian Bay and the Great Lakes; to enter into agreements with other similar companies. T. H. Kilgour, Toronto, who is the principal mover in the Huron and Ontario Ry., is also interested in this undertaking.

A supplemental notice states that it shall be declared in the act that the rates of tolls which shall be asked and the extent of the privileges shall be fixed by the Board of Railway Commissioners; that the height of the arches and the intervals between the abutments or piers for the passage of rafts and vessels shall be subject to the approval of the Governor-in-Council, before the erection of the bridge shall be proceeded with.

Portland Canal-Fear River Valley.—Application will be made next session of the British Columbia Legislature for an act incorporating a company for the purpose of constructing a railway to be operated by steam or any other motive power from the head of Portland Canal along the valley of the Fear River for 30 miles. It is also desired to secure authority to construct branches of 15 miles from the main line, particularly up Glacier, American and Bitter Creeks; to operate telegraph and telephone lines, to develop electrical power and sell the same, to have power to enter into agreements with other companies, to construct docks and wharves and to operate steam and other vessels. Eberts and Taylor, Victoria, B.C., are solicitors for the applicants.

Prince Edward Island Tunnel.—Replying to a question in the House of Commons, Dec. 11, the Minister of Railways stated that a resolution passed by the Maritime Board of Trade in favor of the construction of a tunnel under the Northumberland Strait as a means of maintaining continuous communication between P.E.I. and mainland, was receiving the attention of the Government.

Quebec Bridge and Ry. Co.—Construction work upon the steel work of the Quebec Bridge has been suspended for the season, and the bridge building company is employing its men getting material ready for next season's operations. It is expected to commence the erection of the steel work upon the north side of the river in May. (Dec., 1906, pg. 713.)

Quebec and Isle of Orleans Ry.—The Quebec Legislature will be asked next session for an act incorporating a company with this title for the purpose of constructing a railway from Quebec, crossing over to the Island of Orleans, which it may cross or run around to reach the parish of St. Francois. P. Corriveau, Quebec, is solicitor for the applicants.

Quebec and James Bay Ry.—J. G. Scott, General Manager Quebec and Lake St. John Ry., who is the principal promoter of the Q. and J. B. Ry., in writing to the Quebec Board of Trade, Nov. 28, stated that arrangements had been made in London, Eng., for the necessary capital to construct the first 30 miles from Roberval towards James Bay. It was also probable that the money required for the construction of the line to Chibugamoo would be forthcoming upon condition of a guarantee of interest at 4% by the Provincial Government upon a portion of the cost. At the present time he said the Government did not see its way to give the guarantee asked for. The Board passed a resolution urging the Government to give the guarantee, as the construction of such a railway would bring a large amount of trade into the city of Quebec. (Dec., 1906, pg. 713.)

Quebec and Lake St. John Ry.—Track has been laid on the La Tuque branch as far as the 30th mile from La Tuque Junction, Que., and work is in progress upon the remaining 10 miles of the branch, which will end at La Tuque Falls. Track was laid on 16.75 miles of the branch during 1906. J. Paquet is the contractor. The Gosford branch was extended 1.75 miles during 1906, and now ends at 5.50 miles from Valcartier station. E. Conway, Quebec, is the contractor. The branch from Roberval station to the Government wharf on Lake St. John, one mile, has been completed. (Dec., 1906, pg. 715.)

Quebec Central Ry.—Track has been laid on the extension from Beauceville to St. George, Que., 9 miles. It is proposed to extend this line at a future date to a junction with the Temiscouata Ry., near Cabana station, Que., about 150 miles. The other extension which the company has in contemplation is from Scotts to the southern end of Quebec Bridge, 9.23 miles. (Dec., 1906, pg. 713.)

Quebec, Montreal and Southern Ry.—The work of betterment which has been carried out upon the old Quebec Southern Ry. and South Shore Ry., since they passed under the control of the Delaware and Hudson Co., and were amalgamated with the above title, has included the laying of 32 miles of track with 80-lb. steel, to replace the old 56-lb. rails. Other work of a similar character will be undertaken during 1907. A contract has been let to O'Brien and Mullarkey, Montreal, for the construction of an extension from Pierreville to the Lotbiniere and Megantic Ry. between St. Philemon and St. Jean des Chaillons, 48½ miles; and it is proposed to extend this to the south end of Quebec Bridge, 42 miles; and two miles of terminal tracks in connection with the lines, etc., of the Quebec Bridge and Ry. Co.

The Dominion Parliament is being asked at its current session for an act increasing the powers of the company, and authorizing it to construct a line from Contrecœur to Yamaska, Que. (Dec., 1906, pg. 715.)

Quebec Terminals.—D. McNicoll, Vice-President C.P.R., attended a meeting of the committee which is considering plans for joint terminals for all lines in Quebec City, and suggested that a Union station should be erected on Champlain market; and that Dalhousie and St. Andrew streets be widened so as to permit the laying of four tracks thereon. The engineers were asked to prepare plans and estimates showing the cost of carrying out these suggestions. The sub-committees appointed at the last meeting of the general committee presented reports upon the plans, and the general committee adopted the same, sending them on for further consideration to the National Transcontinental Ry. Commission. The railway sub-committee recommended the Champlain market as a tite for a passenger and freight station for the present, and at the same time contemplating the building of a union passenger station on the heights. The formation of a terminal company was also recommended, involving the bridge and terminals. The steamship sub-committee recommended the 55-ft. line, instead of 40 ft., from Lampson's Cove to the north end of Champlain market square, and that provision be made to wharf the portion between Champlain market and Pointe-a-Carcey for the local market and coasting trade. (Dec., 1906, pg. 715.)

The chairman of the National Transcontinental Ry. Commission, and H. Lumsden, Chief Engineer, were in Quebec, Dec. 14, in connection with the terminal proposals. They visited the river front and had a lengthened conference with a number of those interested in the projected new station.

Quebec Ry. Ferry Co.—Application is being made at the current session for an act incorporating a company with this title and offices at Montreal, for the purpose of operating railway ferries across the St. Lawrence River at any point between Kingston, Ont., and Quebec, Que. The provisional directors named in the bill are: C. Laurandeau, K.C.; E. N. Cusson, L. Garneau, J. F. R. Beaudry and V. Cusson, Montreal.

Quinze and Blanche River Ry.—The Dominion Parliament is being asked at the current session for an act incorporating a company with this title to construct a railway from Dymond tp., on the Temiskaming and Northern Ontario Ry., to or near the mouth of the Quinze River, thence to Quinze Lake, Que. It is also desired to have authority to operate steam and other vessels, to acquire water powers, to develop electrical power and to dispose of the same; and to make agreements with other companies. Perkins, Fraser and Gibson, Ottawa, are solicitors for the applicants.

Red Deer Lumber Co.—A line 5 miles in length from Elk Gate Junction on the Canadian Northern Ry. northerly to Barrows, Sask., has been completed. The line is a private one and is for the company's lumbering operations only.

St. Mary's and Western Ontario Ry.—Application is being made at the current session of the Dominion Parliament for an act extending the time for the construction of this railway. (Dec., 1906, pg. 715.)

St. Maurice Valley Ry.—Tracklaying has been completed upon this line from Three Rivers, along the valley of the St. Maurice River to Shawinigan Falls, Que., 20.85 miles. L. A. Darcy was Chief Engineer in charge of construction, and the St. Maurice Construction Co., Montreal, had the contract. (Nov., 1906, pg. 641.)

Application is being made at the current session of the Dominion Parliament for an

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act extending the power of the company and to increase its bonding powers to an extent not exceeding $35,000 a mile.

Saskatchewan Valley and Hudson Bay Ry.—The Dominion Parliament is being asked at its current session for an act incorporating a company with this title for the purpose of constructing a railway from Edmonton, Alta., via Smoky Lake, Prince Albert, and Pelican Lake to Fort Churchill, Hudson Bay. The provisional directors are: T. W. Rourke, J. Morris, R. Tegler, J. T. Collisson, Edmonton, Alta.; F. J. Loughead, Sarnia, Ont. (Nov., 1906, pg. 641.)

Temiskaming and Northern Ontario Ry.—Track has been laid to McDougall's Chute, the mileage laid during 1906 being from Boston, Ont., 45 miles to the south. Construction is proceeding northerly from McDougall's Chute for seven miles, the contractor being A. R. Macdonnell, New Liskeard, Ont.; and surveys are in progress from the terminus of this seven miles, the end of the present contract, for a further distance of 45 miles, to a junction with the route of the National Transcontinental Ry. There are under construction a branch line from Englehart to Charlton, eight miles, A. B. Spencer, Niagara Falls, Ont., contractor; from Cobalt to Kerr Lake, four miles, Canadian Construction Co., Montreal, contractors; from Haileybury station to Haileybury wharf, one mile, McQuigge and Hunt, Pembroke, Ont., contractors.

A contract has been let to J. Cahill, Bonfield, Ont., for 275,000 ties for the completion of the main line northerly, and for the branch lines now under contract. (Dec., 1906, pg. 715.)

Toronto, Hamilton and Buffalo Ry.—The question of erecting a station at Dundas, Ont., is under the consideration of the management. An order has been approved by the Hamilton, Ont., City Council for the purpose of permitting the construction of a spur line from the T. H. and B. Ry. tracks to the Canadian Westinghouse Co.'s works. (May., 1906, pg. 257.)

Toronto Track Elevation.—The Toronto City Engineer proposes the construction of a viaduct six miles long over which all trains shall enter the new Union station, Toronto. The tracks would be given an elevation of 14 or 15 ft. above the present level, and would do away with the necessity of the erection and maintenance of a number of bridges and level crossings. The cost of the work is estimated at $5,000,000. It is proposed that the railway companies be asked to appoint engineers to go into the whole question of railway approaches to the city between the Humber River on the west, and Logan avenue on the east.

Toronto Union Station.—The G.T.R., to which company was given the order to carry out the construction of the new Union station in Toronto, has informed the city council that the delay in proceeding with the work is due in some measure to the fact that there is a difference between the three companies—the G.T.R., the C.P.R. and the Canadian Northern Ontario Ry.—as to the plans. The latter two companies do not approve of the plans as approved by the G.T.R., and negotiations are in progress for the adjustment of the differences. At a meeting of the Toronto Board of Control, Dec. 7, a resolution was passed to notify the railways to proceed with the erection of the new union station without delay, and that in the event of nothing being done to comply with the request, to apply to the courts to have the order of the Board of Railway Commissioners to the G.T.R. made mandatory. (Aug., 1906, pg. 457.)

Vancouver, Victoria and Eastern Ry.—The contract which has been let to the British Columbia General Contract Co., Vancouver, B.C., is for the construction of 30 miles of line between Cloverdale, on the Vancouver, Westminster and Yukon Ry., easterly via Abbotsford, B.C., to Sumas, a station at the International Boundary, on the line of the Northern Pacific Ry. The work generally is of a heavy character, averaging about 40,000 cubic yards a mile; the bridging is heavy, and totals about 3,750,000 ft. The line will open up a considerable stretch of country in British Columbia, which is now only accessible by the old Yale road. (Dec., 1906, pg. 715.)

Vancouver, Westminster and Yukon Ry.—A branch line is under construction from the south side of False Creek to Burrard Inlet, passing round the end of False Creek. The construction is easy, the only feature of interest being that it includes 1,750 lineal feet of pile trestle. The contractors are the British Columbia General Contract Co., Vancouver, B.C. Press reports state that bids will be asked at an early date for the construction of 40 miles northerly from Vancouver. (Dec., 1906, pg. 717.)

Washington County Ry.—We are advised that during 1906, a diversion of the line, which is owned and operated as the Princeton branch of the Washington County Ry., was made near Sprague's Falls, N.B., which resulted in the addition of 0.35 miles to the length of the track between Banning and Crichton. (Aug., 1906, pg. 457.)

Yonge St. Bridge, Toronto.—Toronto taxpayers are being asked to vote on Jan. 1, upon a by-law for the purpose of borrowing $110,939 upon debentures for the erection of a bridge across the railway tracks at the foot of Yonge st. The by-law is being submitted to carry out the terms of an agreement by which the railway companies undertook to pay $100,000 for the cost of the erection of the bridge, and the city agreed to provide the money to meet land damages, etc., estimated at $100,000. The question of the future maintenance of the bridge is to be decided by the Board of Railway Commissioners. (Aug., 1906, pg. 457.)

York and Carleton Ry.—Track has been laid on the extension from Stanley to Glippen Glen, 3½ miles, and an extension of one mile to Ryan's Brook is under contract. (Nov., 1906, pg. 641.)

Railway Curve Tables is the title of a small volume issued by the Engineering News Publishing Co., 2220 Broadway, New York, at $1 cloth and $1.50 leather. It contains a comprehensive table of functions of a one degree curve, with correction quantities giving exact values for any degree of curve, together with various other tables and formulas, including radii, natural sines, cosines, tangents, co-tangents, etc. There is also added a method of finding any function of a curve of any degree or radius without a field book. The volume is compiled by R. S. Henderson.

The New York branch of the Canadian Camp Club has arranged with the C.P.R. to organize a wolf hunt early in the year. The point of departure will probably be on the Mississaga River, Ont., and should the affair prove a success, a similar hunt will be organized for Northern Quebec. L. O. Armstrong is looking after the arrangements for the C.P.R.

The G.T.R. was the defendant in an action brought in the Ontario courts and disposed of at London, recently, by Griffiths & Co., of Chicago, Ill., to recover $7,200 for rental, etc., of 32 dump cars. The cars were rented in 1903 at $8 a day, and the plaintiffs requested the return of the cars in 1905. The G.T.R. did not return the cars, and in the judgment it is now ordered to pay $200 for each car, to settle up all arrearages of rental amounting to $800, making altogether $7,200, and to pay the costs of the action.

Sir Thomas Shaughnessy's Car.

The C.P.R. has turned out of its Angus shops, at Montreal, for the use of the President, Sir Thos. Shaughnessy, a private car, the Killarney, which, if the opinion of those who are qualified to judge be accepted, is the most commodious and most convenient one that has ever been built on this continent. It might, indeed, be described as the finest car, but this expression conveys with it the idea of elaborate and unnecessary decoration, which is, unfortunately, so often noticeable in cars of this character. The most casual observer, on seeing the interior of the Killarney, is at once struck by the entire absence of ornamentation and the studied plainness of the finish It is a noticeable case of "beauty unadorned," for the beauty of the natural woods which have been used in its decoration is unmarred by the carver's chisel or the gilder's brush. The exterior of the car is finished entirely in mahogany, C.P.R. standard ornamentation being used. The car is a very long one, being 74 ft. over the frame, and 84 ft. 3¼ ins. over the buffers.

At the rear, or observation end, is a large observation platform, recessed into the body of the car for 2 ft., which provides shelter from the wind to those who may be standing on the platform. The platform is surrounded by a heavy railing slightly relieved by polished brass ornamentation. Next to this platform is the observation room, 14 ft. by 9 ft. 8 ins. The walls of this room are finished in selected Circassian walnut, the architectural features being very plain in design, but the room, owing to the beauty of the wood, has an extremely rich appearance. The empire ceiling is finished in stained birch to suit the lighter tones of the walnut. The decklights are in art glass to harmonize with the woods and appointments. The observation windows are unusually large, those at the rear being 5 ft. by 2 ft. 3 ins., and those at the sides 5 ft. by 2½ ft., giving a practically unobstructed view of the scenery. One of the features of this room is an ingenious spring roller map-rack, which is placed in the upper part of the bulkhead and runs transversely. By the release of a lever, the map-rack moves out from the bulkhead so that any one of the maps may be pulled down for examination. When no longer required, by pressure on the same lever, the map-rack moves back into the bulkhead and forms part of the design. Unless known to the onlooker, it is practically impossible to detect its location. The furniture of this room consists of two heavy wire-backed arm chairs, and two sofas which at night may be turned into beds (all of which are upholstered in dark green leather). There is, also, a small writing table and chair at the forward end of the room, both of which are of walnut. The carpet is a heavy Wilton of a rich green shade with a small artistic design.

A handsome corridor, panelled in rich mahogany veneer, furnishes communication from the observation room to the dining room at the opposite end of the car, and to the intervening rooms. One novel feature of this corridor is that it is roofed over flat, the space between the roof of the corridor and the ordinary roof of the car being used for lockers, which are reached from the various rooms. This arrangement adds greatly to the storage accommodation of the car, a feature which appeals to all those who have occasion to use private cars. It also adds much to the appearance of the passage itself. A general lavatory comes next to the observation room. This is finished in ivory white with mosaic tiled floor, the appointments being in white porcelain with nickel-plated fittings. Next to the lavatory is a small room for heavy coats and small hand-baggage.

Next to this comes the President's bedroom, 8 ft. 6 ins. by 6 ft. 9 ins., the woodwork of which is finished in ivory white, the walls

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D. S. WHITE
PRESIDENT

Traymore Hotel Company
CHAS. O. MARQUETTE - MANAGER

being panelled in red silk, the curtains on the windows being of silk to match the panels. The room contains a plain brass bedstead, at the head of which is a small table with drawers, the upper drawer being slightly recessed to admit an electric light switch and bell, so that the occupant of the room may summon an attendant or turn on the light without leaving his bed. On the opposite side of the room is a wardrobe and a dressing-table with drawers underneath. The carpet is a heavy Wilton of a shade harmonizing with the curtains and panels. Opening off this bedroom is a bathroom, which also communicates with the passage and the next bedroom. This room has all the fixtures of an ordinary bathroom, porcelain bath and washstand with nickel-plated fittings, the floor being covered with small mosaic blocks, whilst the walls, from the floor to the cornice are covered with white enamelled tiles, and all exposed woodwork finished in ivory white. Passing through this room another bedroom is reached, finished practically the same as the one described, except that the panels, curtains and carpet are of blue.

The next room to be reached is the Secretary's office and bedroom. This is intended for the President's secretary, but it can also be used as an additional stateroom if required. It is very complete in every detail, having a sofa which at night can be turned into two berths, an upper and a lower, porcelain washing conveniences, cupboards overhead both at the front and rear ends of the room, and a very handsome desk, having a book-case above, the doors of which are fitted with leaded glass windows, whilst underneath are drawers such as one finds in every office desk. The finish of this room is entirely mahogany. The porter's room is immediately next to this, but the section of the car just described is divided from the remainder by a swinging door in the passage to prevent draughts. This room contains two berths, folding washstand and water closet, and is plainly finished in mahogany and green leather. All the rooms are amply supplied with basket racks, coat hooks, etc., of a finish to match the rooms. The kitchen is then reached. This is where the skill of the car builder is taxed to the utmost, for within the smallest possible space must be placed all the essentials of an hotel kitchen, as meals equal to those served in the best hotels have to be cooked here. This room has also to serve the purpose of a pantry, and within such a limited space to find room for the accommodation of kitchen utensils, silverware, china and glassware, seems like attempting the impossible, but in this car it has been accomplished in a manner to satisfy the most exacting. Cupboards for the silver, glass and chinaware, drawers for the knives and forks, etc., refrigerator, working table and sink, a steel range of the latest design and a coal bin complete the fitting of this room. The walls of the kitchen are, for the sake of cleanliness, finished in white enamel tiling, whilst the woodwork is of mahogany veneer. Next comes the dining-room, 12 ft. 8 ins. by 10 ft., finished in very beautiful mahogany veneer and decorated with a very simple marquetry design. The mahogany dining-table will seat eight people comfortably, and ten if necessary. The upholstering of the sofa and chairs is of dark green leather, and the floor is covered with a heavy Wilton carpet of a rich green color.

The car is lighted with electricity, but there is also, in case of failure of the electric light, the C.P.R. standard system of acetylene gas, the fixtures, however, being so arranged that the gas can only be turned on by a special key in the hands of the porter, so as to prevent the gas from being unnecessarily wasted, and to prevent the possibility of a thoughtless guest leaving the burner turned on. From the foregoing description it will be seen that the terms "commodious" and "comfortable" are very apt, and while the car is extremely handsome, the marked absence of anything which may be termed "luxurious" is most noticeable.

OBSERVATION ROOM SIR THOMAS G. SHAUGHNESSY'S CAR KILLARNEY.

DINING ROOM SIR THOMAS G. SHAUGHNESSY'S CAR KILLARNEY.

Orders by the Railway Commissioners.

1902. Nov. 6.—Authorizing revision of location Pheasant Hills Branch, C.P.R., from mileage 379.3 to mileage 381.1.

1903. Nov. 6.—Authorizing G.T.R. to enter upon lot 30, 2nd con., Tp. Brantford, Ont., for purpose of constructing drain to convey water accumulating on its railway.

1904 to 1915, inclusive.—Bell Telephone Co. crossings.

1916. Nov. 7.—Authorizing Nicola, Kamloops and Similkameen Coal and Ry. Co. to open for traffic its railway from Spence's Bridge to Coutlee, B.C., 37.8 miles.

1917 to 1931, inclusive.—North American Telegraph Co. crossings.

1932. Oct. 23.—Authorizing G.T.R. to connect its tracks with the Montreal Park and Island Ry. tracks in St. Laurent, Que.

1933. Nov. 9.—Approving of proposed foot bridge across G.T.R. main line at Emerald St., Hamilton, Ont.

1934. Nov. 9.—Authorizing C.P.R. to reconstruct bridge at mileage 139.98, Fort William section, Ont.

1935. Nov. 9.—Authorizing C.P.R. to reconstruct certain bridges on Smith's Falls section, Ont.

1936. Nov. 9.—Authorizing C.P.R. to reconstruct bridge at Norman, Ont., by means of 60 ft. overhead highway span.

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Exterior of the Private Car "Columbia" now in Commission Demonstrating the Advantages of the New System of Combined Sleeping, Parlor and Dining Car owned by the Company. Protected by Patents in the United States, Canada and Foreign Countries.

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Applicable to Gondola Box, Stock and Coke Cars

1937. Nov. 9.—Authorizing C.P.R. to reconstruct bridges 0.5 and 0.9, Montreal Terminals.

1938. Nov. 9.—Authorizing James Bay Ry. to construct four bridges over outlets of Lake Couchiching,

1939. Nov. 10.—Approving location of Niagara, St. Catharines and Toronto Ry. from ferry docks, Fort Erie, Ont., through Tps. of Bertie, Willoughby and Stamford, to Lundy's Lane, Ont.

1940. Nov. 10.—Approving location of proposed passenger station C.P.R., Sudbury, Ont.

1941. Nov. 10.—Approving deviation of located line of C.P.R. through Sudbury, Ont.

1942. Nov. 10.—Extending time for installation of interlocking plant by Midland Ry. Co. of Manitoba, at crossing of C.P.R. tracks at Elm Creek, Man., for two months.

1943. Nov. 10.—Authorizing H. A. K. Drury, of the Board's staff, to make inquiry and report to Board regarding lack of cars for carriage of grain over the C.P.R. in Manitoba and Saskatchewan. See Dec., 1906, pg. 711.

1953. Nov. 10.—Authorizing the Canadian Northern Ontario Ry. to operate trains over the crossing of the Canada Atlantic Ry. at Parry Sound junction.

1954. Nov. 12.—Authorizing Peterboro Light and Power Co. to lay a gas main under G.T.R. tracks at Simcoe St., Peterboro, Ont.

1955. Nov. 12.—Authorizing Provincial Natural Gas and Fuel Co. to lay a gas pipe under G.T.R. tracks on Victoria Ave., near city limit of Niagara Falls, Ont.

1956. Nov. 12.—Authorizing Dominion Natural Gas Co., to lay a gas pipe under G.T.R. tracks at Chapman St., Galt, Ont.

1957. Nov. 10.—Authorizing Empire Limestone Co. to lay a gas pipe or main under G.T.R. tracks near Sherks, Ont.

1958. Nov. 13.—Sanctioning and approving of junction of Northern Extension Ry. with Northern Pacific and Manitoba Ry. Portage Extension (C.N.R. lessees), near Winnipeg.

1959. Nov. 13.—Authorizing the town of St. Stephen, N.B., to lay a pipe line under C.P.R. tracks at Valley Road crossing.

1971. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 64.8 of Shuswap section, B.C.

1972. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 37.3, Megantic section.

1973. Nov. 10.—Authorizing the C.P.R. to construct bridges at mileage 21.5, 80.7 and 74.0, Smith's Falls section, Ont.

1974. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 102.9, Edmonton branch, Alta.

1975. Nov. 15.—Sanctioning the Huron and Ontario Ry. Co.'s located line from Meaford to near Owen Sound, Ont.

1976. Nov. 12.—Approving proposed supplement 8 to Canadian Freight Classification 12.

1977. Oct. 29.—Amending (on application of the C.P.R.) order dated Sept. 13, 1905, authorizing the Canadian Northern Ry. to cross at rail level the C.P.R. tracks at Findley, Man.

SIR THOMAS G. SHAUGHNESSY'S PRIVATE CAR KILLARNEY.

1944. Nov. 12.—Authorizing the Commissioners of the Transcontinental Ry. to join its tracks with the Canadian Northern Quebec Ry. near Tawachiche station, Que.

1945. Nov. 12.—Authorizing the Commissioners of the Transcontinental Ry. to cross with its tracks the Canadian Northern Quebec Ry. near Tawachiche station, Que.

1946. Nov. 8.—Authorizing the Bell Telephone Co. to charge telephone tolls at present authorized, for three months from Nov. 13.

1947. Nov. 9.—Complaint Kaslo Board of Trade against freight rates on C.P.R. and Nelson and Fort Sheppard Rys. Adjusting freight rates. See Dec., 1906, pg. 711.

1948. Nov. 10.—Authorizing Canadian Northern Ontario Ry. to operate trains over crossing of the G.T.R. Sutton Branch, lot 21, con. 8, Tp. E. Gwillimbury, Ont.

1949. Nov. 10.—Authorizing Canadian Northern Ontario Ry. to operate trains upon crossing of the C.P.R., lot 3, con, 4, Tp. York, Ont.

1950. Nov. 10.—Authorizing Canadian Northern Ontario Ry. to operate trains upon crossing of C.P.R., lot 13, con. 2, from the bay, Tp. York, Ont.

1951. Nov. 10.—Authorizing the Canadian Northern Ontario Ry. to operate trains over crossing G.T.R. Midland branch, from Beaverton station to wharf on Lake Simcoe.

1952. Nov. 10.—Authorizing Canadian Northern Ontario Ry. to operate trains over crossing, G.T.R. Northern Division, on lot 13, con. C, Tp. Mara, Ont.

1960. Nov. 13.—Allowing to the North American Telegraph Co. an extension of two months' time for filing tariffs of telephone tolls.

1961. Nov. 12.—Authorizing the Corporation of Port Elgin, Ont., to carry a water main under G.T.R. tracks on Mill St., Port Elgin, Ont.

1962. Oct. 25.—Authorizing the Windsor and Tecumseh Electric Ry. to erect a trolley wire across G.T.R. right-of-way at Walkerville, Ont., and across two G.T.R. spurs in township of Sandwich East.

1963. Nov. 14.—Authorizing the opening for traffic of the Klondike Mines Ry. from Bonanza to Sulphur Springs, Yukon.

1964. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 63.3, St. Ignace section.

1965. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 4.2, Guelph section, Ont.

1966. Nov. 10.—Authorizing the C.P.R. to construct bridges at mileage 51.9 and 53.1, Laggan section, B.C.

1967. Nov. 10.—Authorizing the C.P.R. to construct bridges at mileage 68.61, 88.73, 30.44, 84.4 and 31.98, Fort William section.

1968. Nov. 10.—Authorizing the C.P.R. to construct bridges at mileage 114.3, 113.8, and 139.7, Mountain section, B.C.

1969. Nov. 10.—Authorizing the C.P.R. to construct a bridge at mileage 10.8, Port Burwell branch, Ont.

1970. Nov. 10.—Authorizing the C.P.R. to construct bridges at mileage 11.8, 111.5, 28.4, 22.2, 28.6 and 103.9, London section, Ont.

1978. Nov. 16.—Permitting the Ontario Power Co. to erect its wires over the G.T.R., the Wabash Rd., the M.C. Rd., the Canada Southern Ry., the N., St. C. and T. Ry. and the N.F.P. and R. Ry., at lots 57 and 59, Tp. Stamford, Ont.

1979. Nov. 16.—Authorizing the Napierville Jct. Ry. to operate an interlocking plant at its crossing of the G.T.R. near Lacolle Jct., Que.

1980. Nov. 15.—Authorizing the amendment of order dated Aug. 6, on application of the C.P.R.

1981. Nov. 16.—Sanctioning revised location of Canadian Northern Quebec Ry. through County of Portneuf, Que.

1984. Nov. 19.—Authorizing the Dominion Natural Gas Co. to lay pipes along and over bridge spanning G.T.R. tracks west of Cayuga station, Ont.

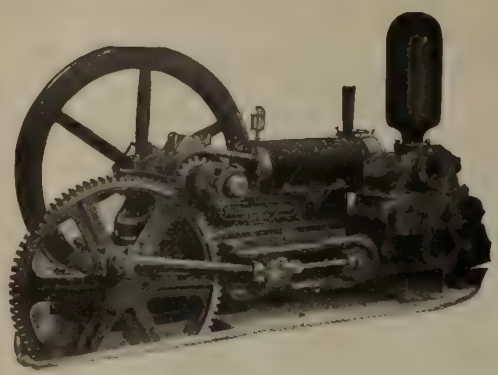
1985. Nov. 19.—Authorizing the C.P.R. to construct a branch line from its track on Higgins Ave., Winnipeg, 38 ft. westerly from westerly limit of Nena St., produced northerly.

1987. Nov. 19.—Amending order dated Aug. 26, on application of Klondike Mines Ry. Co.

1988. Nov. 15.—Authorizing the James Bay Ry. to cross the C.P.R. tracks near Wahnapitae station, Ont.

1989. Nov. 6.—Authorizing the town of Olds, Alta., to construct highways across Calgary and Edmonton branch of C.P.R. in the town.

RAILWAY SUPPLIES



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Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,000	325,100	66,000+
	$2,638,200	$1,708,500	$ 929,700	$ 306,200+

Approximate earnings for Nov., $741,700 against $566,800 for Nov., 1905.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug.	6,170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
	$25,237,792.77	$15,180,643.30	$10,057,149.42	$2,577,644.62+

Approximate earnings for Nov., $6,143,000 against $5,648,000 for Nov., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Oct., $291,472.90; net earnings, $85,382.86 against $260,050.19 gruss and $80,799.79 net for Oct., 1905. Net earning for four months ended Oct. 31, $427,880.75 against $396,910.23 for same period 1905. Approximate earnings for Nov., $265,777 against $269,119 for Nov., 1905.

MINERAL RANGE RY.—Approximate earnings for Nov., $67,668, against $61,582 for Nov.. 1905.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Oct., $1,347,853.75; net earnings, $738,075.78 against $1,226,125.92 gross and $746,131.43 net for Oct., 1905. Net earnings for four months ended Oct. 31, $2,510,158.78 against $2,319,286.05 for same period 1905. Approximate earnings for Nov., $1,111,788 against $1,060,355 for Nov., 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for Oct. as compared with Oct., 1905.

GRAND TRUNK RAILWAY.

	1906	1905
Earnings	$3,024,500	$2,742,636
Expenses	2,086,200	1,901,756
Net earnings	$ 938,300	$ 840,880

CANADA ATLANTIC RAILWAY.

Earnings	$ 194,900	$ 183,514
Expenses	175,900	130,081
Net earnings	$ 19,000	$ 53,433

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 546,000
Expenses	455,000
Net earnings	$ 99,900

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 126,900	$ 114,763
Expenses	107,900	89,008
Net earnings	$ 19,000	$ 25,755

Approximate receipts of the system for Nov., as reported in Montreal: $3,760,728 against $3,446,074 for Nov., 1905.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from July 1 to Nov. 30.

	1906.	1905.	Increase.	Decrease.
Grand Trunk	£3,000,338	£2,741,757	£258,581	....
Canada Atlantic	197,247	191,010	6,237	....
G. T. Western	537,775	493,161	44,614	....
D. G. H. & M.	160,076	138,019	22,057	....
Total.....	£3,895,436	£3,563,947	£331,489	....

The Board of Railway Commissioners has approved of local standard passenger tariffs for the C.P.R. as follows: Arcola to Regina, Sask., 3½ cents a mile; Balcarres to Strassburg, Sask., 3½ cents a mile; Winnipeg Beach and Gimli, Teulon and Komarno, Lauder and Kandabar, Man.; Reston and Ebor, Man., 3 cents a mile; Ebor, Man., and Baring, Sask., Moose Jaw and Tuxford, Sask., 3½ cents a mile; Lacombe and Stettler, Wetaskiwin and Daysland, Daysland and Hardesty, Alta., 4 cents a mile.

Per Diem Car Rates.

Some particulars respecting the new per diem car rules were given in our Dec. issue, pg. 729. The following is the text of the agreement:

It is mutually agreed, jointly and severally, by and between the several railroad companies subscribing and parties hereto, that on and after Dec. 1, 1906, settlement among themselves for the use of freight cars of the said subscribing companies will be made at the rate of 50c. per car per day, without penalty for delay, and that each subscribing company will account and pay for the use of said cars to each of the other subscribing companies accordingly. It is further understood that this agreement in no wise affects the provisions of the per diem rules agreement, except as to the rate for the use of freight cars and the penalty for delay, between the parties to this agreement. All disputes arising under this agreement shall be settled by a special committee appointed for the purpose, to be known as the Car Hire Committee. This agreement shall terminate on July 1, 1907, unless it shall be extended, modified or dissolved, by the vote of the majority of the signers thereto, owning two-thirds of the cars represented, such action to be taken at a meeting of said signers, called by the car hire committee on ten days' previous notice.

In addition to the above, at the car hire meeting, held in Chicago Nov. 9, the following resolutions were adopted: Resolved, That the question of diversion be referred to the proposed car hire committee, with instructions to prepare an agreement for the purpose of this proposed car hire agreement and as supplemental to it, providing for the proper return of the cars, and that they shall also provide an agreement for a penalty of $5 per car for each case of diversion; and that the committee be requested to have the agreement prepared and submitted to the roads prior to Dec. 1, 1906. Resolved, That the car hire committee when appointed be constituted a committee to pass upon questions under this proposed diversion agreement.

In accordance with this resolution, the committee has prepared an agreement covering the subject of diversion, which is as follows: It is mutually agreed, jointly and severally, by and between the several railroad companies subscribing and parties hereto that on and after Dec. 1, 1906, they will abide by the following diversion rule: Foreign cars must be returned promptly to their owners as follows: 1. Loaded to or via the home road. If such load is not available, cars of immediate connections must be delivered to the home road; cars of other roads must either be loaded to an immediate connection of the car owner or be delivered to the home route. 2. Delivered empty to a connection for loading to the home road or home route, to be returned within four days. Such deliveries shall be indicated on the junction report by the words "For home loading." 3. Forwarded to a foreign road when received consigned to that road. Any other delivery to a foreign road will be a diversion for which a diversion penalty of $5 must be paid to the owner of the car. If the enforcement of these rules shall result in a considerable empty mileage without compensating loaded mileage, the case shall be adjusted on the basis of 3c. per empty car mile, to be paid by the roads responsible. All disputes arising under this agreement shall be settled by the car hire committee. This agreement shall terminate on July 1, 1907, unless it shall be extended, modified or dissolved, by the vote of the majority of the signers thereto, owning two-thirds of the cars represented, such action to be taken at a meeting of said signers, called by the car hire committee on 10 days' previous notice. In case the agreement is extended, subscribers may withdraw by giving three months' previous notice in writing to the Secretary of the car hire committee.

The following Canadian railways, or railways having Canadian connections, have signed the new agreement: Grand Trunk Ry., Duluth, South Shore and Atlantic Ry., Minneapolis, St. Paul and Sault Ste. Marie Ry., Pere Marquette Rd.

The London Interswitching Case.

The arguments in the appeal of the G.T.R against an order of the Board of Railway Commissioners, in regard to the interswitching of freight cars between the G.T.R. and the C.P.R. at London, Ont., were heard by the Supreme Court judges at Ottawa, Dec. 3. The order was made on the application of the G.T.R. and authorized that company to construct, maintain and operate at London, Ont., a branch line for the interchange of cars to and from industrial and business sidings on the lines of both railways, with the condition that the traffic agreements between the companies in regard to the branch line should be submitted to the board for approval. The city is an interested party in respect of having facilities provided and fair traffic rates fixed. By leave of the board the appeal was allowed on the following questions of law: (1) Had the board authority to make the order in such terms? (2) Are sections 266 and 267 of the Railway Act, 1903, applicable to this case, where one and the same rate is charged to and from all points in the district in and about the city of London affected by the order? (3) Does the order involve the use of the tracks, station and grounds of the G.T.R. by the C.P.R. at London, for which the G.T.R. should be compensated? (4) Was the board bound to consider, in estimating the remuneration or compensation to be allowed to the G.T.R. (a) the magnitude of the G.T.R. business as compared with that of the C.P.R. at London; (b) their comparative advantages; (c) the loss to one company whereby the other might gain; (d) the cost of the G.T.R. terminals, etc., otherwise than as evidence of a fair value of the services to be rendered and the use of the facilities, and (e) the further expense cast upon the G.T.R. in order to carry out the terms of the order? The appellants contend that the board exceeded its jurisdiction; that sections 266 and 267 of the Railway Act do not apply under the circumstances of this case, but that section 137 alone applies, and that all the matters enumerated should, as a matter of law, be taken into consideration in fixing the compensation to be allowed to the G.T.R.

Judgment was delivered Dec. 10, the decision being against the G.T.R., the appeal being dismissed with costs.

January Birthdays.

Many happy returns of the day to—

G. Bazzard, ex-Freight and Passenger Agent, Delaware, Lackawanna and Western Rd., Toronto, now of Hamilton, Ont., born at Westhide Court, Herefordshire, Eng., Jan. 3, 1838.

A. H. Bears, Master of Bridges and Buildings, C.P.R., Winnipeg, Man., born at Charlottetown, P.E.I., Jan. 6, 1857.

R. H. Bell, Commercial Agent, Canadian Northern Ry., Pittsburg, Pa., born at Toronto, Jan. 13, 1865.

G. M. Bosworth, 4th Vice-President C.P.R., Montreal, born at Ogdensburg, N.Y., Jan. 27, 1858.

G. McL. Brown, General Passenger Agent C.P.R. Atlantic Steamship Line, Montreal, born at Hamilton, Ont., Jan. 29, 1856.

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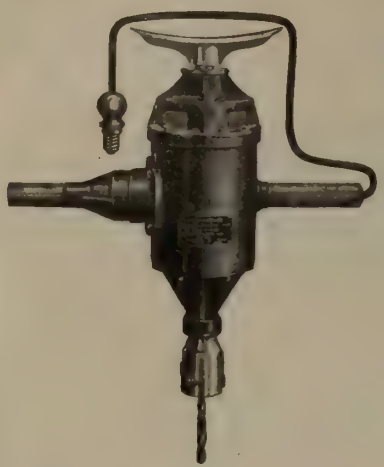

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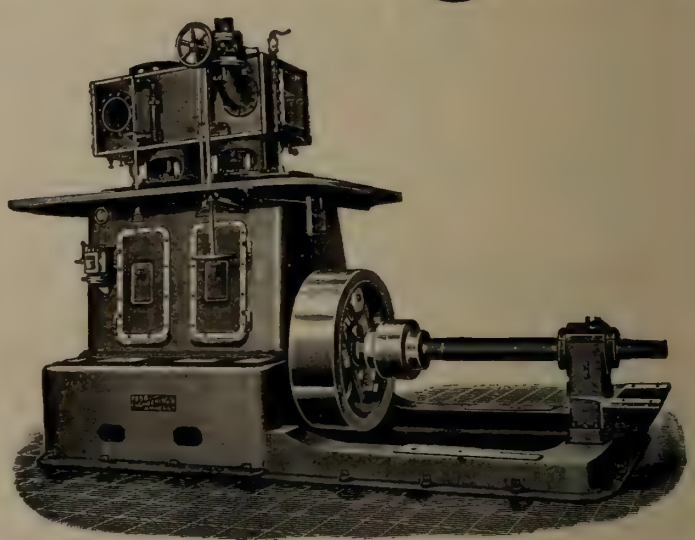

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P. W. Brown, Purchasing Agent, Duluth, South Shore and Atlantic Ry., and Mineral Range Ry., Marquette, Mich., born at Uxbridge, Worcester Co., Mass., Jan. 18, 1845.

E. L. Chudleigh, Assistant Superintendent C.P.R., Calgary, Alta., born at Clinton, Ont., Jan. 3, 1873.

W. A. Cowan, Resident Engineer, C.P.R., Toronto, born at Galt, Ont., Jan. 22, 1877.

N. S. Dunlop, Tax Commissioner C.P.R., Montreal, born near Almonte, Ont., Jan. 17, 1861.

Sir Sandford Fleming, K.C.M.G., Director C.P.R., born at Kirkcaldy, Scotland, Jan. 7, 1827.

T. A. Foque, Mechanical Superintendent Minneapolis, St. Paul and Sault Ste. Marie Ry., Minneapolis, Minn., born at Boston, Mass., Jan. 14, 1866.

H. V. Harris, ex-General Manager Midland Ry. of Nova Scotia, Truro, N.S., now of Louisville, Ky., born at Devonport, Devonshire, Eng., Jan. 16, 1857.

G. F. Hichborn, Agent Great Eastern Fast Freight Line, New York City, born at Boston, Mass., Jan. 31, 1875.

Carl Howe, Assistant General Freight Agent Michigan Central Rd., Buffalo, N.Y., born at Berrien Springs, Mich., Jan. 11, 1870.

W. J. Hunter, Commercial Agent, G.T.R., Winnipeg, born in Toronto, Jan. 10, 1864.

Jas. Kent, Manager C.P.R. Telegraphs, Montreal, born Jan. 15, 1854.

A. Lichteinhein, Galena Signal Oil Co., New York, born there Jan. 15, 1855.

A. J. McGee, General Accountant Temiskaming and Northern Ontario Ry., Toronto, born at Lachine, Que., Jan. 24, 1876.

Geo. Pepall, Canadian Agent, National Despatch, Great Eastern Line, Toronto, born at High Wycombe, Buckinghamshire, Eng., Jan. 15, 1849.

W. Phillips, General Eastern Agent Canadian Northern Ry., and General Freight and Passenger Agent, Canadian Northern Ontario Ry., Toronto, born at Toronto, Jan. 31, 1870.

J. Pullen, Assistant Freight Traffic Manager, G.T.R., Montreal, born at Shepton Mallet, Somersetshire, Eng., Jan. 23, 1863.

S. L. Shannon, Comptroller and Treasurer Intercolonial Ry., Moncton, N.B., born at Halifax, N.S., Jan. 18, 1862.

S. J. Sharp, Western Passenger Agent C.P.R. Atlantic Steamship Line, Toronto, born at London, Ont., Jan. 21, 1860.

J. R. Steele, Freight Claims Auditor C.P.R., Montreal, born at St. Johns, Newfoundland, Jan. 14, 1856.

W. A. Trueman, Director, Secretary and Treasurer Albert Southern Ry., Albert, N.B., born at Wallace, N.S., Jan. 29, 1849.

S. G. Wagstaff, Commercial Agent, G.T.R., Toledo, Ohio, born at Hamilton, Ont., Jan. 6, 1866.

F. J. Watson, Division Freight Agent G.T.R., Montreal, born at Toronto, Jan. 12, 1866.

G. H. Webster, C.E., President British Columbia Contract Co., Vancouver, B.C., born at Creemore, Ont., Jan. 31, 1857.

T. H. White, Chief Engineer of Construction, Mackenzie, Mann & Co.'s lines east of Port Arthur, Ont., Toronto, born at St. Thomas, Ont., Jan. 27, 1848.

A school for educating young men in Great Britain in Canadian railway methods, to fit them for positions in this country, has been opened at Birmingham, Eng., under the auspices of a Toronto man.

At a meeting of the Winnipeg Jobbers' Association held recently, the principal subject discussed was the transportation service, and it was decided to employ the services of an experienced railway man who will represent the interests of the Association with the public carriers, and also before the Railway Commission.

Railway Rolling Stock Notes.

The Canadian Northern Ry. ordered two snow ploughs for Dec. delivery from Rhodes, Curry & Co., Amherst, N.S.

The G.T.R. recently placed an order for 400 refrigerator cars, 60,000 lbs. capacity, for delivery in April and May.

The Canada Car Co. made delivery between Nov. 14 and Dec. 14. of 500 box cars to the G.T. Pacific Ry. and the Canadian Northern Ry.

The G.T.R. between Oct. 20 and Dec. 8, 1906, added to its rolling stock 23 compound consolidation locomotives, two snow ploughs and one second-class car.

The Canadian Locomotive Co. between Nov. 20 and Dec. 12 delivered two 6-wheel switching locomotives to the Intercolonial Ry. and two mogul locomotives to the Quebec Central Ry.

The Locomotive and Machine Co. of Montreal delivered 14 compound consolidation locomotives to the G.T.R. during Nov., and continued making deliveries of the same class of locomotives during Dec., to complete orders from that railway.

The C.P.R. between Nov. 14 and Dec. 14 received the following rolling stock from its Angus, Montreal, shops: Three passenger locomotives, four sleeping cars, five 1st class cars, 10 baggage cars, 403 box cars, 80 flat cars and four snow ploughs.

The White Pass and Yukon Ry. during the last financial year sold two locomotives, a combination car and a passenger coach, and four freight cars to the Klondike Mines Ry., one locomotive, two passenger coaches and 15 flat cars to the Tanana Mines Ry.

The Intercolonial Ry. received the following rolling stock between Nov. 16 and Dec. 17. Five switching engines from the Canadian Locomotive Co., Kingston, Ont.; four wing elevator plows, one double track plow, and 16 Hart convertible dump cars from Rhodes, Curry & Co., Amherst, N.S.

Replying to a question in the House of Commons, Dec. 11, the Minister of Railways stated that G. H. Joughins, Superintendent of Motive Power of the Government Railways, had reported favorably upon the use of electric motor cars and that tenders would shortly be called for the supply of the same.

MacDonell & O'Brien, contractors G. T. Pacific Ry., Eastern section, have ordered from the Dominion Dump Car Co., Montreal, 30 Hart convertible cars, 34 ft. long, 9 ft. wide, outside measurement, 40 tons capacity, similar in design to those ordered recently by the Canadian Northern Ry., also a special ballast spreader car.

The C.P.R. between Nov. 14 and Dec. 13 placed orders for the following rolling stock at its Angus, Montreal, shops: 10 passenger locomotives, 3,000 box cars, 500 flat cars, 100 freight refrigerator cars, two flanger cars, seven ballast distributing cars, two ballast trimmers, and two tourist cars; and at its Farnham, Que., shops, 50 vans.

The dimensions of the 6-wheel switching locomotive which the Locomotive and Machine Co. of Montreal is building for the Dominion Coal Co., Sydney, N.S., are: Cylinders, 19 by 26 in.; driving wheels, 50 in. diameter; weight on drivers, in working order, 120,000 lbs.; tank capacity, 3,000 galls.; coal capacity, 4 tons; wheel base, 11 ft.; diameter of boiler at largest end, 65½ in.

The Crossen Car Manufacturing Co., Cobourg, Ont., has recently delivered 100 box cars to the Canadian Northern Ry., and two baggage and express cars, and four first-class coaches to the Temiskaming and Northern Ontario Ry. It has also received orders for 16 second-class coaches, four mail and express cars and four baggage cars for the Canadian Northern Ry., and six flat cars for the British Columbia Mills Lumber and Trading Co.

The C. P. R. motor car which has been operated between Montreal and Vaudreuil, Que., for several months, was taken off the route early in Dec., and returned to the Angus, Montreal, shops for repairs and such improvements as have been suggested by the experience of the summer's work. We are officially advised that the management is very much pleased with the results of the season's running.

The following rolling stock has been delivered recently for the Canadian Northern and other Mackenzie, Mann & Co.'s lines: 263 box cars, 6 refrigerator cars and 4 passenger cars from Rhodes, Curry & Co., Amherst, N.S.; 41 box cars from the Canada Car Co., Montreal; 45 box cars from the Crossen Car Manufacturing Co., Cobourg, Ont.; 4 locomotives and one switcher, from the Canada Foundry Co., Toronto.

The 30-ton box cars which the C.P.R. is building at its Angus, Montreal, shops will be of the standard dimensions and construction, the special fittings including Simplex body and truck bolsters, Simplex brake beams, Simplex roller bearings for trucks, Susemihl roller side bearings, and Westinghouse air brake. Similar special fittings are being provided for the 45 30-ton flat cars, and 10 30-ton stock cars also being constructed.

The Dominion Parliament is being asked at its current session to vote the following sums for rolling stock for the Intercolonial railway: Air brakes to freight cars, $21,000; to exchange drawbars of freight cars, $37,500; air compressors and reservoirs, $5,000; air brake equipment, $19,500; ballast plough and unloader, $6,500; new machinery for locomotive and car shops, $100,000, also $20,000 for rolling stock for the Prince Edward Island Ry.

The 200 Rodger Hart convertible ballast cars, which the C.P.R. is building at its Angus, Montreal, shops, will have a capacity of 40 tons, and the following general dimensions, etc.: Length inside as a gondola car, 34 ft. 10 in.; length inside as a hopper car, 24 ft. 6 in., width inside, 8 ft. 8 in.; height of sides, 3 ft. 0¼ in.; width over frame, 4 ft. 10 in.; wheels, 33 in., cast iron; journal bearings, 5 by 9 in, M.C.B. Special fittings: Simplex body and truck bolsters, Simplex brake beams, Westinghouse air brakes, McCord journal boxes, Susemihl roller side bearings.

The mail and express car which the C.P.R. is having built at its Angus, Montreal, shops, will be 60 ft. long over frames; body and under frame, wood; axles, 5 by 9 in., M.C.B.; bolsters, double; brake beams, Simplex with adjustable head; brake shoes, cast iron; brakes, Westinghouse air, high speed; brasses, 5 by 9 in., M.C.B.; heating system, Gold with Frumveller heater; journal boxes, M.C.B.; no platforms, but fitted with steel I beams to carry draft rigging, etc.; roof, standard passenger, covered with canvas; springs, 34 in. quadruple elliptic; trucks, 4-wheel passenger; wheels, 36¼ in. steel tyred.

Sir T. G. Shaughnessy, President C.P.R., in an interview at Winnipeg, Dec. 1, stated that there was undoubtedly a car shortage on the line at the present time, but it was impossible to obtain either locomotives or cars anywhere. The company could not get the raw material—steel, iron or lumber—to make the cars as fast as it desired, and all other railway companies and car manufacturing companies were in the same condition. The company's works at Montreal were turning out 24 freight cars a day, and a corresponding number of locomotives a month, which were being absorbed by the operating department as fast as they were delivered.

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The specifications for the two U8 locomotives which the C.P.R. is building at its Montreal shops, provide as follows:

WEIGHT.—On drivers, 185,000 lbs.; total, 185,000 lbs.

CYLINDERS.—Diameter, 22½ in.; stroke, 28 in.

DRIVING WHEELS.—Diameter, 52 in.; tyres, Krupp crucible.

BOILER.—Type, radial stayed; working steam pressure 175 lbs.; heating surface, tubes, 2,310; firebox, 182; total, 2,492 sq. ft. No. of tubes, 349 of 2 in.; length, 12 ft. 7⅛ in. between sheets.

FIREBOX.—Length, 102½ in.; width, 70 in.; grate area, 49 ft. 7 in.

TANK CAPACITY.—Water, 5,000 Imp. galls.; coal, 10 tons.

SPECIAL FITTINGS, ETC.—Westinghouse air and straight air brakes; Krupp and open hearth steel axles; Simplex brake beams; C.P.R. standard brake shoes, journal bearings; Gold steam heat equipment.

Following are the principal dimensions of the four tourist cars which the C.P.R. is having built at its Angus, Montreal, shops: Length, over frame, 72 ft.; width, over frame, 9 ft. 10½ in.; body and under frame, wood; axles, 5 by 9 in., M.C.B.; bolsters, double; brake beams, Simplex with adjustable heads; brake shoes, cast iron, M.C.B.; brakes, Westinghouse air, high speed; brasses, 5 by 9 in., M.C.B.; heating system, Gold with Frumveller heater; journal boxes, 5 by 9 in., M.C.B.; lighting, acetylene gas; seats, standard colonist car type of slatted wood; roofs, standard passenger car type covered with canvas; trucks, 5 by 9 in., 6-wheel passenger; wheels, 36¼ in., steel tyred, Krupp; springs, 38 in., double elliptic.

The specifications for the ten class G.2.H locomotives which the C.P.R. is building at its Angus, Montreal, shops for May delivery, provide as follows:

WEIGHT.—On drivers, 139,300 lbs.; total, 212,300 lbs.

CYLINDERS.—Diameter, 21 in.; stroke, 28 in.

WHEELS.—Diameter of drivers, 69 in.; tyres, Standard Steel Co., Krupp crucible steel.

BOILER.—Type, radial stayed wagon top; working steam pressure, 200 lbs.; heating surface, 2,959 sq. ft.

TUBES.—Number, 22 of 5 in. and 193 of 2¼ in.; length, 19 ft. 6 in.

FIREBOX.—Length, 7 ft. 10⅛ in. inside; width, 5 ft., 9⅛ in. inside; grate area, 45.6 sq. ft.

TANK.—Capacity, water, 5,000 Imperial galls.; coal, 10 tons.

SPECIAL EQUIPMENT, ETC.—Westinghouse air brake; Krupp and open hearth steel axles; Simplex brake beams for tender; C.P.R. standard brake shoes and journal bearings; C.P.R. crucible steel springs.

The specifications for the colonist car which the C.P.R. is building at its Angus, Montreal, shops, provide as follows: Length, 67 ft.; width, 9 ft. 10½ in.; capacity, 18 sections; body and under frame, wood; axles, 5 by 9 in., M.C.B.; bolsters, double; brake beams, Simplex with adjustable heads; brake shoes, cast iron, M.C.B.; brakes, Westinghouse air, high speed; brasses, 5 by 9 in., M.C.B.; heating system, Gold with Frumveller heater; journal boxes, 5 by 9 in., M.C.B.; lighting, acetylene gas; roof, standard passenger type covered with canvas; seals, standard colonist car type of slatted wood; springs, 38 in., quadruple elliptic; trucks, 5 by 9 in., 4-wheel passenger; vestibules, wide; wheels, 36¼ in., steel tyred, Krupp.

The G.T.R. has put into service a number of new second-class coaches between Montreal and Ottawa. These cars are 75 ft. 6 in. long, and weigh 107,760 lbs., and are mounted on 6-wheel trucks. They have standard wide vestibules with steel platforms. The interior of the car is finished in mahogany, and the lighting arrangements are supplied wth Pintsch gas. The seats are upholstered in leather, and give seating capacity for 74 passengers, including a smoking room which accommodates 13 people. Women's and men's toilet rooms are provided at either end of the car. Roller curtains are attached to the windows, a carpet strip covers the centre of the floor, while linoleum covers the passageways and smoking room.

The specifications for the two pile drivers which the C.P.R. is building at its Angus, Montreal, shops, provide as follows: Wheel base of car, 36 ft. 4 in.; wheel base of truck, 5 ft. 4 in.; frame can be swung completely round except for interference of car body; piles can be driven 17 ft. 2 in. on either side of centre of track, and about 16 ft. 7 in. in front of leading wheels; batter piles cannot be driven; leaders to be swung by hand power and raised by engine; idler car is required; wood car body mounted diamond pattern steel trucks, journals, 4¼ by 8 in.; frame carrying leaders traverses lengthways of car; height of leaders, rail to crosspiece on top 42 ft.; self propelling, leaders can be raised by power; double cylinder hoisting engine; length of car over end sills, 45 ft.; width of car over sills, 9 ft. 10 in.; six wheels, 33 in. cast iron, and two 34 in., steel tyred; height from rail to top of car body, 4 ft. 0⅛ in.

Sir Sandford Fleming, Ottawa, is President, and C. C. Chipman, Winnipeg, Man., is one of the directors of a new company which is laying out a town at Exshaw, 25 miles east of Banff, Alta., and putting up a cement manufacturing plant.

The bill annually introduced by Mr. Lancaster in reference to the protection of level crossings of railways, which is generally sacrificed towards the end of the session, with many other private members' bills, has been again read a first time in the House of Commons. He has also introduced another bill which has for its object the enabling of a property owner from whom a railway company is taking land, to take the initiative for arbitration.

The Grand Trunk Ry. is applying at the current session of the Dominion Parliament for an act repealing or amending the provisions of section 3, chap. 37 of the statutes of 1853, and particularly so much of the section as provides that the fare or charge for each third-class passenger shall not exceed one penny currency for each mile travelled, and that at least one train having in it third-class carriages, shall be run every day throughout the length of the line. The formal conviction of C. M. Hays, Second Vice-President and General Manager, for non-compliance with this section was registered at the Toronto Police Court, Dec. 1, and arrangements made for a stated case to be submitted upon the question of jurisdiction. On Dec. 14, W. N. Robertson, who initiated the proceedings, applied through counsel for a mandatory order to compel compliance with the act, but Chief Justice Meredith refused, stating that the applicant had his remedy in a suit for damages.

The Illinois Central Rd. has submitted a complaint to the Interstate Commerce Commission alleging that the C.P.R. is advertising rates for freight transportation to England and the continent considerably below those announced by U.S. lines, and setting out that it is not compelled by law to give any previous notice of a changie of rates. The U.S. lines are unable, the complaint says, to meet this competition because of that provision of the new railroad law which prescribes that "no change shall be made in rates, fares, charges, or joint rates, fares and charges which have been filed and published by any common carrier in compliance with requirements of this section, except after 30 days' notice to the commission and to the public. At a conference held at Washington, D.C., Dec. 11, at which the C.P.R. and the G.T.R. were represented, A. H. Harris, for the C.P.R., volunteered to file its tariffs via steamship line with the Interstate Commerce Commission, where the freight is taken from a point in the U.S. to a point in adjacent foreign countries to be transported to an interior point. These tariffs would not be changed without 30 days' notice.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Dominion Iron and Steel Co. rolled its first 100-lb. steel rails, Dec. 17.

Geo. McDougall, for many years manager of John McDougall & Co.'s iron works, Drummondville, Que., died at Montreal recently.

The Canadian Westinghouse Co. has issued circular 1139 describing its starting and field rheostats, and type C integrating Wattmeters.

The Vulcan Iron Works Co., Toledo, Ohio, has issued a handsome calendar, the leading design being an illustration of the Giant steam shovel.

The main offices, drafting rooms, and some other buildings at the Robb Engineering Co.'s plant, Amherst, N.S., were destroyed by fire, Dec. 3.

The Carbolite Carbolineum Co. (Ltd.), Toronto, has issued a pamphlet describing its preservative process for railway ties and timbers, and timber preservation generally.

J. Maw, who for the past eighteen years has been Superintendent of Works of the B. Greening Wire Co., Hamilton, Ont., has retired. He will remain as a director of the company.

The Canadian Westinghouse Co.'s salesmen and travellers attended their annual convention in Hamilton, Ont., recently. During their visit they were entertained at dinner at the Hamilton Club, by M. S. Bredin, Sales Manager.

The Pintsch Compressing Co. has been licensed to do business in Ontario, and will operate a plant at Toronto for railway car lighting purposes. The Pintsch Co. is affiliated with the Safety Car Heating & Lighting Co., of New York.

The International Marine Signal Co., a company carrying on business in Canada under the Dominion Companies' Act, has been registered in Ontario under the act respecting the licensing of extra-Provincial companies, T. L. Willson, Ottawa, being appointed its attorney.

The Mica Boiler Covering Co. has completed its contract for the insulation of all cylinders, steam pipes, etc., on H.M.S. Warrior. The company has also secured contracts for the insulation on board another battleship, and for the insulation of boilers, cylinders, steam pipes, etc., on the new Cunard Steam ships Lusitania and Mauretania.

The National Car Co. has been incorporated under the Ontario Companies' Act, with a capital of $300,000 and offices at Toronto, for the purpose of building and equipping cars for railways, and to manufacture and sell all kinds of railway equipment and appliances. The provisional directors are: Alex. Stewart, T. H. Kilgore, and Miss Louise Williams of Toronto. The first named is described as a manufacturer; the second as an accountant, and the third as a stenographer. T. H. Kilgore is the Secretary of the Huron and Ontario Ry. Co.

Mussen's Limited has been incorporated under the Dominion Companies' Act with a capital of $500,000 and offices at Montreal, for the purpose of acquiring the business now carried on at Montreal, Toronto,

CANADIAN IRON & FOUNDRY CO.

LIMITED

MANUFACTURERS OF

Car Wheels, Cast Iron Water and Gas Pipe, Flanged Pipe, Specials, Valves, Hydrants, etc.

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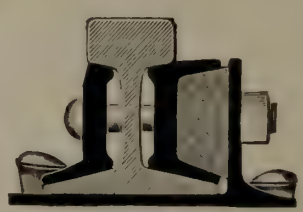
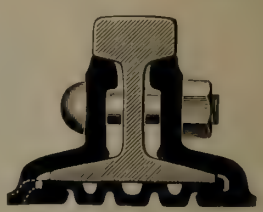


WEBER JOINT



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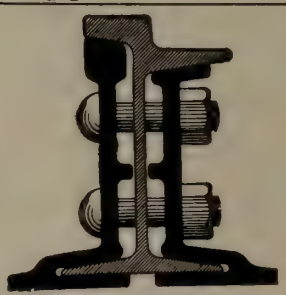

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Winnipeg, Vancouver and elsewhere in Canada under the name of W. H. C. Mussen & Co., as dealers in railway, mining, municipal and contractors' supplies. Power is also given to engage in a variety of businesses germain to any of the objects specified, to enter into agreements and partnerships with other firms or persons; to take stock in other companies, or to guarantee interest on stocks and bonds, and other purposes. The provisional directors are: W. H. C. Mussen, G. Boulter, G. G. Foster, K.C.; C. G. McKinnon, W. R. Stavely, Montreal.

The B. Greening Wire Co., Hamilton, Ont., has issued its calendar for 1907. It is the usual design showing portraits of the President and incorporator of the present firm, the founder of the business in Hamilton, and the founder of the present firm in Warrington, Eng., where the late B. Greening came from to start business in Canada. From the cut of the buildings it will be seen that there was no growth during 1906, but plans are being prepared for considerable increase during the current year to take care of the increased volume of business that this firm is sharing with the rest of Canadian manufacturers in Canada. The company did not issue a new catalogue in 1906, but has some left from the last issue which will be forwarded to any one who will write stating the branch of business that they are particularly interested in. This information is necessary as a different catalogue is issued for each department.

The Canadian Locomotive and Machine Co. is making extensive additions to its plant at Kingston, Ont., including the following new buildings: Boiler, erecting, tender and tank shops. These shops will be all under one roof in a building 200 by 352 ft., with four bays. Iron foundry, 140 by 84 ft. Addition to machine shop, 203 by 75 ft. Pattern storage building, 90 by 60 ft., three stories. Power house about 86 by 75 ft. The management gave considerable attention to the question of power to be employed, and was very much inclined to erect a gas producer plant, and run the shops with electric energy supplied by gas engines and motors, but the problem of heating the shops in winter was such a serious one, that the conclusion was arrived at that the modern steam plant from which the exhaust could be used for heating purposes, would be most economical; this power plant will consist of vertical boilers, equipped with mechanical stokers, superheaters, and induced draft apparatus, high speed engines, and Westinghouse generators, together with the necessary condensers, feed water heaters, etc.

C.P.R. Betterments, Construction, Etc.

Chateau Frontenac Extension.—The C.P.R. has acquired the buildings necessary on St. Louis, Des Carrieres and Mount Carmel streets, Quebec, for the purpose of erecting the proposed extension of the hotel. The aggregate cost of the several properties is estimated at $200,000. It is said that as soon as arrangements can be made with the tenants to obtain possession of the properties, the clearing of the site will be commenced. It is also said that the addition will be connected with the present hotel building by an underground tunnel for the use of servants, transferring baggage, etc., and that an archway will be erected across Des Carrieres St., for the use of guests. A new dining-room to run parallel with St. Louis St., and to have accommodation for 1,000 guests, is said to form a feature of the new building.

Port Rouge Spur.—The Board of Railway Commissioners is being asked to approve of the construction of a spur line of 2,800 ft. from near Port Rouge station, Que., mileage 133.92, from St. Martins Junction, with a spur 450 ft. long.

St. Martins Junction Spur.—The Board of Railway Commissioners is being asked for an order authorizing the construction of a branch from mileage 88.88 easterly from St. Martins Junction station, Que., northerly and easterly to the Canada Paint Co.'s premises.

Windsor St. Station.—Nothing definite has been arranged as to when work upon the further extension of the Windsor St. station, Montreal, will be gone on with, but it is not expected that anything will be done during this year. The company has acquired practically all the property it requires for the extension. The plans provide for an extension down to St. Antoine St., and west to Mountain St.

Spurs at Westmount.—The C.P.R. is applying to the Board of Railway Commissioners for authority to construct two spur lines in Westmount, Que.

Vaudreuil-Smith's Falls Second Track.—It is reported in Montreal that the C.P.R. is inviting contractors to give prices on the work of constructing a second track between Vaudreuil, Que., and Smith's Falls, Ont.

Pontiac Pacific Junction Ry.—The C.P.R. has purchased the water power at Deschenes Falls, and it is reported will develop the same, using the electrical power generated for the purpose of operating trains on the old Pontiac Pacific Junction Ry. The C.P.R. also owns the Hull Electric Ry.

Campbellford to Toronto.—At a session of the Board of Railway Commissioners at Toronto, Dec. 12, A. McMurchy, of the C.P.R. legal staff, stated that the company was going to construct a line from Campbellford to Toronto, passing through all the principal towns between these points, and crossing the Don River at Toronto, south of Queen St. He argued that the C.P.R. should only be called upon to pay a small part of the cost of erecting a high level bridge across the Don at Queen St. F. P. Gutelius, Assistant Chief Engineer, stated that the route had been surveyed, and without doubt the best entrance to Toronto, was east and south of the G.T.R. tracks.

Guelph and Goderich Ry.—Track has been laid from Guelph to Blyth, 63.5 miles, and progress is being made with the remainder of the line into Goderich, Ont., about 17 miles. The contractors are Campbell and Folinsbee, Strathroy, Ont.; Piggott & Co., Hamilton, Ont.; B. Gibson, Toronto. There is also under contruction a branch from Linwood into Listowel, about 17 miles, the contractor for which is B. Gibson. P. A. Peterson is Chief Engineer.

Woodstock to Brantford.—We have been advised by an official that so far as he is aware there is nothing in the newspaper item referred to in our last issue that the C.P.R. would shortly proceed with the construction of a line to connect Woodstock and Brantford, Ont.

Toronto-Sudbury Branch.—The first section between Bolton Jct. and Craighurst, Ont., of the new line designed to give a direct connection by the C.P.R. between Toronto and Sudbury, Ont., was opened for passenger traffic, Dec. 1.

Five miles of the line from Parry Sound southerly is ready for the rails. The erection of the bridge across the Seguin valley, at Parry Sound, has been started, and it is expected that it will take the best part of the year to complete it. The work to the north of Parry Sound is being pushed towards the French River, where it will connect with the mileage already graded south from Romford, where the line will join the main transcontinental line east of Sudbury.

Fort William-Winnipeg Second Track.—The following portions of the second track work between Fort William, Ont., and Winnipeg have been completed and handed over to the operating department: West Fort to Neebing, mileage 2.7 to mileage 7.6; Neebing to Murillo, mileage 7.6 to mileage 13.4; Dexter to Linko, mileage 54.0 to mileage 59.6; Murillo to Kakabeka, mileage 13.4 to mileage 18.3; Ignace to Gull River, mileage 148.4 to mileage 141., as officially reported by the engineer in charge

Winnipeg Train Shed.—A contract has been let to the Dominion Bridge Co., Montreal, for the manufacture and erection of the steel work for the concourse and train shed to be erected in connection with the recently completed station at Winnipeg. It is expected to begin the erection of the train shed at an early date and to have it completed by the end of April.

Manitoba and Northwestern Ry.—Power is being asked at the current session of the Dominion Parliament to construct a branch line from the M. & N.W. Co.'s main line between Theodore and Insinger, westerly and northwesterly to a junction with the C.P.R. Quill Lakes branch, in tp. 32, range 18 or 19 west of the second meridian, a distance of about 80 miles.

The Dominion Parliament is also being asked for an act authorizing the construction of a branch line from Bredenburg, on the M. & N.W. main line, northerly to or near Kamsack, Sask., about 42 miles.

Earl Grey or Bulyea Southwesterly.—Application will be made at the current session of the Dominion Parliament for an act authorizing the construction of a branch from Earl Grey or Bulyea, Sask., on the Pheasant Hills branch, or some point between these places, southwesterly to tp. 20 or 21, range 21, west 2nd meridian.

Saskatoon to Strassburg.—Work was suspended early in Dec. upon the grading between Saskatoon and Strassburg, Sask., the present terminus of the Pheasant Hills branch. This is the branch which is being continued westerly from Saskatoon to connect with the Wetaskiwin branch of the Calgary and Edmonton Ry. The British Columbia General Contract Co. has the contract.

Irrigation Works near Calgary.—The constructing of the branch irrigation canals near Calgary, Alta., in the area which the C.P.R. is reclaiming, has been suspended for the season. The work is being done by the British Columbia General Contract Co., Vancouver, B.C.

Calgary Machine Shops.—The company's machine shops at Calgary, Alta., are being extended to meet the increasing demands for repairs to rolling stock. The new buildings are being erected by the British Columbia General Contract Co., Vancouver, B.C.

Calgary and Edmonton Ry.—The Dominion Parliament is being asked for an act authorizing the construction of a branch from tp. 47, range 20, west 4th meridian, upon the Wetaskiwin branch, northwesterly to the main line in tp. 52, range 24, west 4th meridian.

A contract has been let to the British Columbia General Contract Co., Vancouver, B.C., for the erection of six steel spans on the Calgary and Edmonton Ry.

Nicola, Kamloops and Similkameen Ry.—A train service was put in operation early in Dec. over this line from Spence's Bridge to Nicola, at which point a town site has been laid out. Work is going ahead on the extension of the line towards Midway on the C.P.R.'s Crow Nest branch.

Esquimalt and Nanaimo Ry.—The object of the survey which a party under F. H. Shepherd is making on Vancouver Island

NOVA SCOTIA STEEL AND COAL CO. LIMITED

MANUFACTURERS OF

BRIGHT COMPRESSED STEEL SHAFTING

From $\frac{5}{8}$ to 5 inches in diameter. Guaranteed straight and true to within $\frac{1}{500}$ of an inch.

Spring, Reeled Machinery, Tire, Toe Caulk, Sleigh Shoe, Angles, Special Sections and all Merchant Bar Steel. Sheet Steel up to 48 inches wide.

Railway and Electric Railway Car Axles, Fish Plates, Spikes and Track Bolts

Tee Rails 12, 16, 24, and 28 lbs. per yard

Heavy Forgings a Specialty

"Scotia" Pig Iron for Foundry use

Works:
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is to discover an easier pass than one already surveyed at an altitude of 1,200 feet for the purpose of constructing a line from Nanaimo to Alberni, B.C. The distance by wagon road between these points is 46 miles.

Sir T. G. Shaughnessy, President C.P.R., visited Winnipeg recently, and had a lengthened consultation with W. Whyte, Second Vice-President, C.P.R., and President E. and N. Ry., respecting the affairs of the latter line. He said, in an interview: "We are making some preparations to clear up 150,000 acres of land on Vancouver Island, but the details of this plan are not fully completed. The plan is under way, however, and it can be judged how much work it means when it is calculated that it costs from $80 to $100 an acre to clear up land such as we propose to clear."

Surveys are in progress for a line from the present terminus at Wellington to Sandwich, B.C., about 98 miles. The following lines are also under consideration, but surveys are not at present being made: From Duncans to Sarita Bay, 71 miles; from Sandwich to Quatsino, 180 miles.

Railway Finance, Meetings, etc.

Canadian Northern Ry.—Application is being made at the current session of the Dominion Parliament for an act increasing the bonding powers upon the company's lines, other than those from Edmonton, Alta., to the Pacific, and in British Columbia, from $35,000 to $40,000 a mile; to confirm an agreement with the G.T. Pacific Ry. respecting the construction and use of terminals at Winnipeg, and for the expenditures upon the same; the confirmation of the issue of 4% perpetual guaranteed debenture stock, and mortgage in trust to the British Empire Trust Co., and the National Trust Co., on account of the purchase of the Qu'Appelle, Long Lake and Saskatchewan Ry.

Columbia and Western Ry.—A suit has been entered in the B.C. courts by the C.P.R., the defendant being F. A. Heinze, the original builder of the C. and W. Ry. The B.C. Government gave a land bonus of 760,000 acres for the building of the line, and by the terms of the sale to the C.P.R., Heinze was to retain half of this area. The C.P.R. wishes to dispose of some portion of the land falling to its share, and the present action is being brought to compel Heinze to select his half of the land grant.

Dominion Atlantic Ry.—A deed of conveyance has been deposited with the Secretary of State at Ottawa, transferring all the property, rights and franchises of the Midland Ry. Co., Limited, to the Dominion Atlantic Ry. Co. There has also been filed a trust deed between the Dominion Atlantic Ry. and C. F. Kemp and T. R. Ronald, trustees, securing an issue of debenture stock to the amount of £292,500 to be called the Dominion Atlantic Ry. Extension Debenture Stock.

In the House of Commons Dec. 7, the Premier stated that the lease of the Windsor branch of the Intercolonial Ry. to the Dominion Atlantic Ry. would expire in 1914, and the question of its renewal was a matter for serious consideration.

Duluth, South Shore and Atlantic Ry.—Reports are current in St. Paul, Minn., that the D., S.S. and A. Ry. is to be absorbed by the Minneapolis, St. Paul and Sault Ste. Marie Ry. Both lines are controlled by the C.P.R.

Grand Trunk Ry.—Application has been made to the Stock Exchange, London, Eng., for the listing of a further issue of £1,500,000 of G.T.R. 4% guaranteed stock.

Great Northern Ry. of Canada.—Questions affecting the construction and early financing of this railway, are being investigated in the Supreme Court of Quebec in connection with the liquidation of the Great Northern Construction Co., an order for the winding up of which was obtained in Montreal by Ross, Barry & McRae, railway contractors. The G.N. Construction Co. was incorporated in the State of Georgia, with head offices in New York city. A commission failed to elicit any information from Col. McNaught, President; H. H. Melville, Vice-President, and E. E. Leng, Treasurer, and the case was thereupon transferred to Quebec in order that the Quebec shareholders might be examined.

Hampton and St. Martins Ry.—See St. Martins Ry.

Intercolonial Ry.—The accounts for the year ended June 30, 1906, submitted to the House of Commons Nov. 29, showed that the revenue was $7,643,829.90, and the working expenses $7,581,914.36, leaving a surplus of $61,915.54. For the five months ended Nov. 30, 1906, the earnings show an increase of about $500,000 over those of the corresponding period of 1905.

London and Port Stanley Ry.—Owing to the increased earnings during the current year, it is estimated that the London, Ont., City Council will receive $25,000 as its proportion of the revenue. The line is leased to the Lake Erie and Detroit River Ry., which is owned by the Pere Marquette Rd.

Midland Ry.—See Dominion Atlantic Ry.

Pere Marquette Rd.—The report that the C.P.R. will absorb the P.M. Rd. continues to be circulated in Western Ontario. The advantages which the purchase of the line would be to the C.P.R., are being fully discussed in the newspapers published in the district through which the line runs.

Prince Edward Island Ry.—In the budget speech, in the House of Commons, Nov. 29, Hon. W. S. Fielding said the P.E.I. Ry. was not usually self-supporting, and he had hardly felt at liberty to hope it would be so. However, there is an improvement, for whereas in 1904-5 there was a deficit of $151,375.19, the deficit in 1905-06 was only $36,982.59. The revenue for 1905-06 was $257,270.57, and the working expenses $294,253.16.

Quebec Central Ry.—Gross earnings for Oct., $76,503.41; net earnings, $26,257.35, against $68,867.20 gross and $22,710.48 net for Oct., 1905. Net earnings for ten months ended Oct. 31, $291,299.64, against $233,426.20 for same period 1905.

Quebec and Lake St. John Ry.—The London, Eng., stock exchange has been asked to list a further issue of £40,000 prior lien 4% bonds of this railway, numbered 4,251 to 4,650.

The question of the control of the Q. and L. St. J. Ry. has been the theme of considerable discussion in Quebec for some time past. It has been stated that Mackenzie, Mann & Co. have secured 51% of the common stock, but up to Dec. 20, no official announcement had been made to that effect. The nearest to an official statement is an interview with W. Hanson, one of the directors, through whose brokerage firm in Montreal the purchase was said to have been made. Mr. Hanson is reported to have said that the railway had not been sold. One report states that the price paid was $34 per share. The capital stock of the company is $6,000,000. Another report states that there is a movement also in progress for the purchase of the Quebec Ry., Light and Power Co., and its amalgamation with the Q. and L. St. J. Ry. The Quebec Board of Trade, at a meeting held Dec. 11, passed a resolution setting out that any change in the management of the railway would not be in the interests of Quebec, and that as the Province contributed $2,500,000, and the city of Quebec $450,000 towards the construction of the line, the Provincial and the city government should have something to say in the direction of its policy, in its control, and in the retention of the head office, work shops and management in Quebec city.

Qu'Appelle, Long Lake and Saskatchewan Ry. and Steamboat Co.—The transfer of the line from Regina to Prince Albert, Sask., from the C.P.R., which has been operating it under lease, to the Canadian Northern Ry., by which company it has been purchased, took place Dec. 15.

St. Martins Ry.—Application is being made for a charter of incorporation under the New Brunswick Companies' Act, by G. W. Vaughan, of St. Martins, N.B.; W. E. Foster, W. G. Scovil, H. A. McKeown, of St. John, N.B.; and F. M. Anderson, of Campbellton, N.B., with the title of the St. Martins Ry. Co., to take over and operate the Hampton and St. Martins Ry. The proposed capital is $99,000, and the offices are to be at Hampton, N.B. The railway was recently sold to satisfy a judgment obtained by A. P. Barnhill, under the provincial act respecting the sale of railways under foreclosure of mortgage or execution, the purchaser being G. W. Vaughan.

Temiskaming and Northern Ontario Ry.—Earnings for Sept.: Passenger, $20,303.73; mails and express, $1,776.11; freight, $18,617.91; telegraph and telephone, $1,419.47; miscellaneous, $1,310.97; total, $43,428.19. Expenditure, $31,816.68, leaving net earnings of $11,611.51.

The public loan of $3,000,000 on the bonds of the T. and N.O.R., has been fully subscribed. The greater part of the issue was taken in Ontario, and only $100,000 went outside Canada. The loan is at 3½%, and has freedom from Provincial taxation and succession duties.

Temiscouata Ry.—Traffic receipts for Nov. $10,622.41, against $10,032.49 for Nov., 1905.

Toronto, Hamilton and Buffalo Ry.—Earnings for Nov. $65,146.61, against $62,243.00 for Nov., 1906.

Railway and Canal Expenditures.

The public accounts for the year ended June 30, 1906, show that the following amounts were expended upon capital account during the financial year:

RAILWAYS—		
Intercolonial Ry	$3,765,170.90	
P.E.I. Ry	496,124.89	
National Transcontinental Ry	1,841,269.95	
		$6,102,565.74
CANALS—		
Cornwall	$ 37,879.09	
Galops	167,426.91	
North Channel	83,028.98	
Soulanges	5,000.22	
Lachine	103,798.28	
Sault Ste. Marie	120,000.00	
Trent	319,789.49	
Welland	715,198.24	
		1,552,121.21
PUBLIC WORKS—		
Montreal harbor	$ 67,855.80	
Port Arthur and Fort William harbors	247,762.55	
Port Colborne harbor	115,182.93	
Quebec harbor	197,000.40	
Georgian Bay to Montreal, waterway surv'y	243,789.45	
River St. Lawrence ship channel	1,056,995.90	
		1,928,587.03
		$9,538,273.98

Bonds of the undermentioned works have been guaranteed by the Dominion Government to the following extent:

QUEBEC BRIDGE AND RY. CO.—The guarantee is for the principal $6,678,200 and for interest thereon at the rate of 3% for 50 years

CANADIAN NORTHERN RY.—The guarantee is for the principal and interest thereon at the rate of 3%, £1,923,287 sterling for 50 years.

GRAND TRUNK PACIFIC RY.—The guarantee is for a sum equal to 75% of the cost of construction of the Western Division of the National Transcontinental Ry., but not exceeding $13,000 a mile in respect of the Prairie section.

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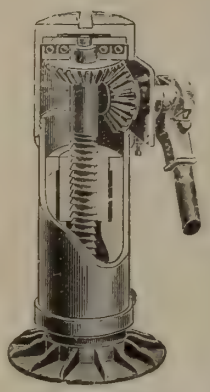
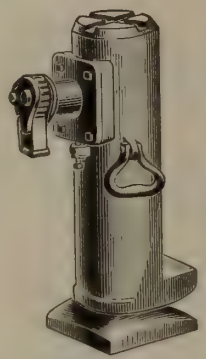
ARE MADE IN CANADA AND SAVE YOU DELAY AND DUTY ON AMERICAN MADE JACKS.


Sectional View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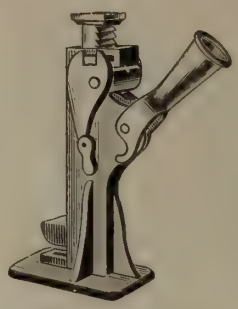
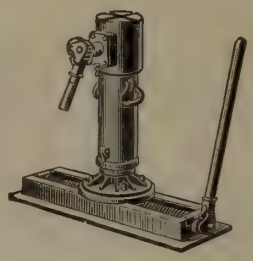
50 Styles 8 to 70 Tons Capacity
Carried in stock for IMMEDIATE DELIVERY


15 Ton Track Jack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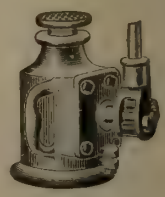
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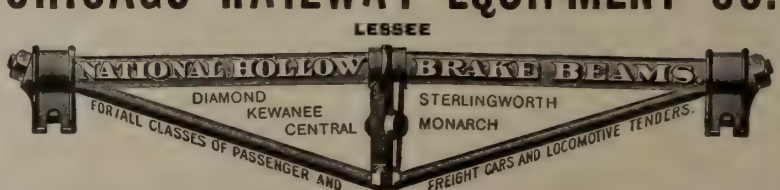

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The C.P.R. and the United States.

In a recent interview Sir T. G. Shaughnessy, President C.P.R., is reported to have said: "The C.P.R. does not extend into the U.S. It is essentially a Canadian corporation. True, it became interested in some U.S. lines 20 years ago by helping them financially when they needed aid badly. One of these lines, the Duluth, South Shore and Atlantic, has not added to its mileage for years past. The other, commonly known as the 'Soo' line, has during the past ten years constructed a good many miles of railway, and will, no doubt, in the interest of its traffic, find it desirable to build a good many more. The Soo line is a dividend payer, and the C.P.R., like any other reasonable shareholder, gives its support to the board of directors of that property whose policy is progressive and prudent. Neither the C.P.R. in Canada nor the Soo line in the U.S. builds a single mile of railway for the purpose of injuring its neighbors. Every mile added to either system is for the purpose of providing transportation facilities where they appear to be required and of adding to its revenue. The C.P.R. did not build the extension to Spokane, nor did it provide money for building it. Its relation to the Spokane International Ry. Co. is only in the nature of a traffic agreement. The rates from the east to Spokane are made on precisely the same basis as those from eastern points on any of the transcontinental roads to interior points in the west. No company could afford to base its rates for the shorter mileage on Pacific coast rates, because these are established by water competition so that I think all the companies, including the C.P.R., pursue the same recognized policy in fixing these interior rates."

Interlocking System Rules.

The Board of Railway Commissioners have made the following order ,no. 2105, dated Nov. 27, 1906: "The Rules and Regulations of the Board as approved Oct. 18, 1904, are amended by striking out all the paragraphs under the heading 'Interlocking System,' and immediately preceding the heading 'General Requirements,' and substitute therefor the following:

"INTERLOCKING SYSTEM

"Rules governing the use of interlocking and derailing signals and speed of trains where one railway crosses another at rail level, or where a railway crosses a drawbridge.

"1. The normal position of all signals must indicate danger.

"2. When the distant semaphore indicates caution, the train passing must be under full control and prepared to come to a full stop before reaching the home signal,

"3. When the home signal indicates danger, it must not be passed.

"4. When clear signals are shown where one railway crosses another at rail level, the speed of passenger trains must be reduced to 35 miles an hour, and freight trains to 20 miles an hour until the entire train has passed the crossing.

"5. When clear signals are shown where a railway crosses a drawbridge, the speed of passenger trains must be reduced to 25 miles an hour and the speed of freight trains to 15 miles an hour until the entire train has passed the drawbridge."

The Toronto and Niagara Power Co. received its first delivery of power from the electrical development station at Niagara Falls, Ont., on Nov. 20, but the distribution of power to the electric light station, and other consumers in Toronto, did not begin until some days thereafter.

BRANTFORD STATION, GRAND TRUNK RAILWAY.

Revision of Freight Rates.

The Canadian Manufacturers' Association has issued a circular to its members as follows: "The question of re-adjustment of international freight rates so as to overcome discrimination in favor of shippers from U.S. points is under advisement by the Railway Commission. The railways have submitted a scheme for revision of the rates to Eastern Ontario, Quebec and Maritime Province points, which they claim will do away with the discrimination. To adopt their scheme a uniform freight classification must be used, and they propose the Canadian Freight Classification with ten classes, instead of the Official U.S. Classification with only six classes which has heretofore been used on international business. The plan proposed will involve increases as well as reductions in freight rates from U.S. points. In order to protect manufacturers, the railways have stated they will avoid any advance in freight rates on raw materials which come from the U.S., and to accomplish this will put in commodity tariffs for traffic which is moving in sufficient volume to warrant it, such for instance as iron and steel, lumber and so forth. So that we will be fully advised of what goods are coming from the U.S. for use in the process of manufacture, will you kindly enumerate the goods, if any, which you are importing for that purpose, and say in what quantities brought in. The information is desired only in connection with this international freight rate proposition."

Railway Subsidies in 1905-06.

The Dominion Public Accounts for the year ended June 30, 1906, show that there was paid on account of subsidies, $1,637,574, to 11 railways. The amount was distributed as follows:

Atlantic and Northwestern Ry.	$186,000
Chateauguay and Northern Ry.	116,000
Halifax and Southwestern Ry.	176,512
James Bay Ry.	651,264
Kootenay and Arrowhead Ry.	89,076
Middleton and Victoria Beach Ry.	50,303
Nicola, Kamloops and Similkameen Coal and Ry. Co.	110,592
Northern Colonization Ry.	75,376
Orford Mountain Ry.	45,764
Quebec and Lake St. John Ry.	86,016
Restigouche and Western Ry.	50,070

G.T.R. Betterments, Construction, Etc.

Montreal Track Elevation.—C. M. Hays, Second Vice-President and General Manager, stated Dec. 12, to Alderman Sadler, Chairman of the Montreal City Council Committee on Level Crossings, that a conference between the company's representatives and the council would be arranged for an early date. Personally he was in favor of a new station being built at the same time as the track elevation was carried out, but he did not know whether he would be able to get the directors in England to share his views. The plans and estimates for the work will be presented when the conference is held.

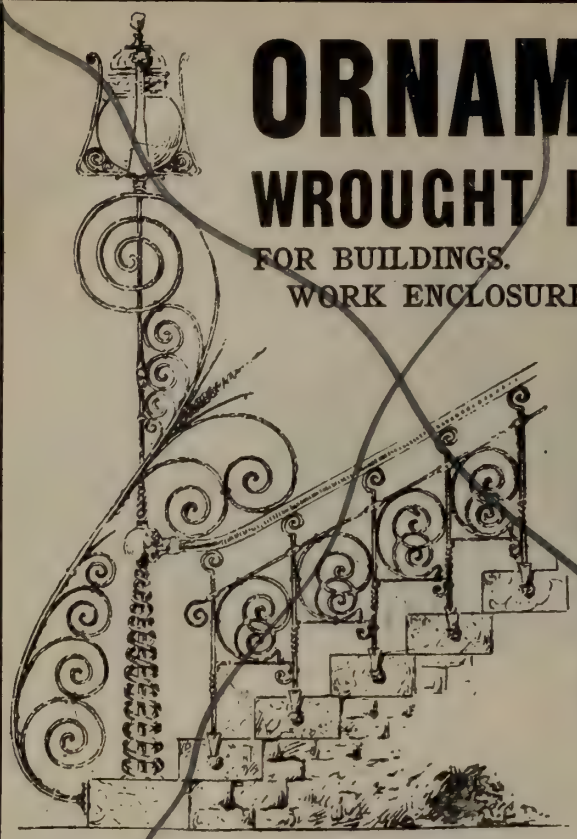
Ottawa Central Station and Hotel.—Plans for the proposed new central station and hotel at Ottawa have been submitted to the Premier and Minister of Railways for approval. It is expected that a start will be made upon the erection of the building early in the spring.

North Bay to Lake Abitibi.—Press reports state that the G.T.R. will construct a line from near North Bay to a junction with the G.T. Pacific Ry. near the Frederick House River, directly south of the big bend of the Abitibi. The projected line will run through the Cobalt district to Lake Temagami, and then turn northwesterly to the junction. A line between these points is among those contemplated in the charter of the G.T. Pacific Ry.

Stratford Shops.—E. H. Fitzhugh, Third Vice-President, and W. D. Robb, Superintendent of Motive Power, had an interview with the Stratford aldermen, Dec. 3, and subsequently a delegation visited Montreal, where the matter of the extension of the shops was discussed. The plans contemplate the expenditure of $200,000 instead of $100,000, as was originally contemplated. The company desires to have an additional street closed so as to facilitate the enlargement of the shops. The deputation expressed the opinion that this would be agreed to by the citizens.

Stratford Station.—The erection of an improved station at Stratford, Ont., is one of the works which it is expected will be undertaken at an early date. It is likely that it will be accompanied by a general rearrangement of the yards and tracks.

London Improvements.—Extensive works are being carried out in the vicinity of London, Ont., one of them being the erection of



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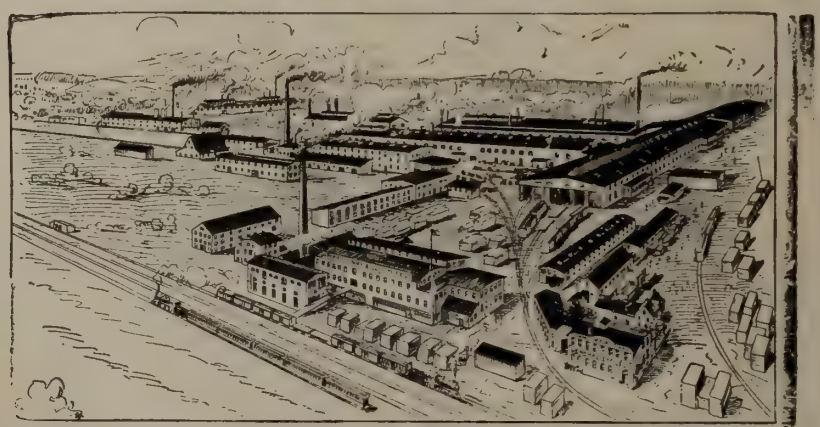

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a high trestle near Cove bridge. This piece of track elevation extends from Egerton St. to Hyde Park Jct., and in some places the track is being raised 35 ft. W. C. Stevens, Toronto, is the engineer in charge of the work. Other extensive improvements are in contemplation in London including track elevation, the enlargement of the station, and the rearrangement of the yards. An agreement with the city has not yet been reached, but F. H. McGuigan, Fourth Vice-President, was in the city consulting with the City Engineer upon the matter early in Dec.

Battle Creek Shops.—Extensive shops are being built at Battle Creek, Mich. The buildings comprise machine and erecting, boiler and tank shop under one roof, the building being 175 by 817 ft. It will contain 25 erecting pits, nine boiler stalls and nine tank stalls. The foundation work has been started. Other buildings will be erected, and it is expected that the whole of the buildings will be completed by the end of the year.

Track Elevation at Chicago.—The work of separating the grades of the G.T. Western Ry., 49th St. line, between Kedzie Ave. and Wallace St., Chicago, was begun on April 15, 1906, and is still in progress. The operation covered the elevating of three miles of double track main line, including the Aberdeen St. yard and also the Indiana Harbor Ry. double tracks, which are parallel with the G.T.W. Ry. tracks. Twenty-four grade crossings have been eliminated, and also the grade crossings with the Calumet Terminal and the Pennsylvania Ry., which may probably be restored when these roads decide on track elevation. The tracks were raised an average of 15 ft., giving an overhead clearance of 12 ft. on 20 of the streets, the remaining four streets on which the Chicago City Ry. operates require an overhead clearance of 13.5 ft., which was maintained by lowering these streets 1.5 ft. It was found to be more economical to elevate the tracks the full height, rather than depress all the streets. The filling for the work, which necessitated moving 550,000 cubic yards of material, was procured at Oak Glen, on the G.T.W. Ry., and handled by the company's equipment to Chicago, a distance of 20 miles. The method adopted for doing the filling, was to first elevate the south G.T. track to grade, on a temporary pile trestle, building the trestle over the streets sufficiently strong to carry traffic, but between the streets the trestle was simply made heavy enough to carry the empty cars. The trestle was then filled in between the streets, and all the timber used was removed, except the piles; the filling was unloaded in the usual way, by means of plows and unloaders. While the work of elevating the first track was in progress, the regular traffic was operating over the Indiana Harbor Ry. tracks. After the first track was completed, the remaining tracks were built by widening out the embankment and building pile bridges over the streets. The work of grading was completed practically on Oct. 1, over 500,000 yds. of material having been put in place by that date. Concrete abutments and retaining walls to the extent of 25,000 cubic yards will be required, of which 16,000 cubic yards is already constructed, and it was expected to have all concrete work completed Dec. 31. The steel bridges for the street crossings are being constructed, and are expected to be in place in the early part of 1907. As stated previously, the work was commenced April 15. Trains were using the high grade line Aug. 5, and grading for all the tracks was completed Oct. 1. The completed work for both the G.T.W. Ry and the Indiana Harbor Ry. will cost, when completed, in the neighborhood of $1,000,000, not including the proportion borne by the city of Chicago, which amount will include abuttal damages.

MAINLY ABOUT PEOPLE.

H. V. Harris, formerly Manager of the Midland Ry. of Nova Scotia, is now living at Louisville, Kentucky.

T. A. Piddington, director of the Quebec and Lake St. John Ry., died somewhat suddenly at Quebec, Nov. 26.

H. A. Wells, Eastern Passenger Agent, Baltimore and Ohio Southwestern Ry., at Buffalo, N.Y., died Nov. 30.

G. M. Bosworth, Fourth Vice-President C.P.R., was laid up for several days early in Dec. with an attack of la grippe.

Jas. E. Carruthers, who died at Pasadena, Cal., Dec. 7, was a son of Jas. Carruthers, grain exporter, etc., Montreal.

A. R. Creelman, K.C., Chief Solicitor C.P.R., has been elected a Fellow of the Royal Colonial Institute, London, Eng.

F. L. Pomerov, Assistant General Traffic Manager, New York, Central and Hudson River Rd., died at Brooklyn, N.Y., Nov. 26.

W. H. Alford, Brantford, Ont., who has been in the G.T.R. service for 49 years, for 41 of which he acted as conductor, has retired.

Jos. Hardisty, who has acted as manager for Lord Strathcona and Mount Royal in Montreal for over 20 years, died there Dec. 3, aged 74.

Jas. Leitch, K.C., chairman of the Ontario Railway and Municipal Board, has taken up his residence at 30 Dunbar Road, Toronto.

Mrs. Thompson, wife of Senator F. P. Thompson, of the New Brunswick Telephone Co., died suddenly at Fredericton, N.B., Nov. 30.

Hon. W. Gibson has been elected President, and S. Barker, M.P., Hamilton, and A. W. Mackenzie, Toronto, directors of the Hamilton Jockey Club.

Miss Edna McGuigan, daughter of F. H. McGuigan, Fourth Vice-President G.T.R., was married at Montreal, Dec. 1, to H. L. Paddock, of Washington, D.C.

Neil Stewart, train despatcher on the Nova Scotia Steel and Coal Co.'s railway, Sydney Mines, N.S., was married there Dec. 12 to Miss M. McKeigan.

M. C. Dickson, G.T.R. agent at Woodstock, Ont., has been granted leave of absence, and will take a lengthened trip to Scotland before resuming duties.

A. McColl, at one time in the G.T.R. service at Hamilton, Ont., and for the last ten years with the American Express Co., New York, died in that city, Dec. 18.

R. McColl, Provincial Engineer of Nova Scotia, delivered a lecture on bridge construction before the Engineering Society of Dalhousie University, Nov. 30.

A. Campbell, M.P., Toronto Junction, Ont., has been re-elected chairman of the House of Commons Committee on Railways and Canals for the current session.

J. Moran, who celebrated his golden wedding at Westmount, Que., Dec. 1, was for 40 years a locomotive driver on the G.T.R. running between Montreal and Lachine.

Jas. Lipscomb, of the White Pass and Yukon Ry. service, has been visiting Calgary, Alta., where he was a C.P.R. official in the early days of that company's existence.

J. W. Grier, insurance agent, who died in Montreal, Dec. 9, was engaged in the promotion of railway companies, one of them being the Nova Scotia Eastern Ry.

Bay View House, Deseronto, Ont., the residence of E. W. Rathbun, M.P.P., President of the Rathbun railway, navigation and allied companies, was burned Dec. 18.

Geo. Brennan, chief clerk to the Superintendent Canadian Northern Ry., Edmonton, Alta., died in the hospital there recently, from the effects of drinking formalin.

J. M. Fotheringham, resident engineer G.T. Pacific Ry., Kaministikwia, Ont., was married recently at Windsor, Ont., to Miss P. Dickenson, formerly of Fort William, Ont.

Mrs. Lumsden, widow of the late Alex. Lumsden, M.L.A., Ottawa, lumberman and vessel owner on Lakes Temiskaming and Kippewa, died at Phydelphia, N.Y., Nov. 26.

W. McGillis, railway contractor, who died at Kankakee, Ill., Dec. 4, was a native of Glengarry county, Ont. He did some work on the G.T.R., but moved to the U.S. in 1858.

C. T. Long, ex-Manager of the Northern Navigation Co. of Ontario, has been in Egypt for some time, and has contributed several descriptive letters to the Toronto Globe.

P. Amesse, ironfounder, Montreal, who died there Dec. 14, was engaged in contracting work in connection with the engines and machinery upon the Welland and Galops canals.

Miss O. Hays, second daughter of C. M. Hays, Second Vice-President and General Manager G.T.R., was married at Montreal recently to T. Davidson, fourth son of Mr. Justice Davidson.

Sir T. G. Shaughnessy, President C.P.R., returned to Montreal Dec. 3, after having made a trip of inspection over the Minneapolis, St. Paul and Sault Ste. Marie Ry. and visiting Winnipeg.

R. J. Cherry, formerly Superintendent of the C.P.R. dining car department at Vancouver, B.C., and latterly in the service of the Atcheson, Topeka, and Santa Fe Rd., died at Chicago, Ill., Dec. 18.

W. B. Johnson, C.E., who died at Niagara Falls, N.Y., Dec. 15, formerly resided in Montreal, and had been engaged upon the electric power development works at Shawinigan Falls and Niagara Falls.

Mrs. Drinkwater, wife of C. Drinkwater, Secretary C.P.R., died at Montreal, Dec. 15. Mrs. H. P. Timmerman, wife of the General Superintendent Eastern Division, C.P.R., Montreal, is a daughter.

A Fredericton, N.B., press report states that Hon. A. G. Blair, formerly Minister of Railways and Canals, is to be appointed Lieutenant-Governor of New Brunswick in Feb., when the position becomes vacant.

C. W. Cooper was presented with a sea lion leather travelling bag by the employes of the Canadian Northern Ry. passenger department, upon the occasion of his promotion to the position of Assistant General Passenger Agent.

Mrs. C. A. Drury, who died at St. John, N.B., Nov. 26, aged 72, was mother of E. H. Drury, C.E., now in Mexico, and of H. A. K. Drury, C.E., Assistant Engineer of the Board of Railway Commissioners at Winnipeg.

R. Scott, who has been appointed C.P.R station agent at Chatham, Ont., was presented with an address and a purse of gold by the business men of Woodstock, Ont., on his leaving that place after 12 years' residence.

O. A. Barberie, I.C.R. station agent at Campbellton, N.B., died there Dec. 11, aged 74. He entered the service in 1869, was the oldest station agent on the line, and was prominent in promoting tourits travel over it.

A. B. Murdoch, travelling auditor C.P.R., who has been moved to Toronto, was presented with a case of pipes, Dec. 10, by the members of the Crescent St. Church Young Men's Association, Montreal, of which he was financial secretary.

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E. G. Russell, who was Manager of the Intercolonial Ry. for some time in 1901-02, and who is now on the G.T. Pacific Ry staff, has been appointed postmaster, of Prince Rupert, B.C., the Pacific coast terminus of the new transcontinental line.

G. G. Ruel, Assistant Solicitor of the Canadian Northern Ry., Toronto, has been appointed attorney for the St. Leon Water Co., a Dominion company which has been granted a license to do business in Ontario, under the act relating to foreign corporations.

W. E. Costello, who recently resigned the position of Assistant Superintendent G.T.R., Battle Creek, Mich., and who was previously with the G.T.R. at London, Ont, is reported to have been appointed General Superintendent Oregon Shore Line, at Salt Lake City, Utah.

Miss L. Mullins, who died in Toronto Dec. 4, was a sister of W. Mullins, formerly Superintendent Central Vermont Ry., St. Albans, Vt., and now manager of the Costa Rica Ry. in one of the Central American republics, and also a sister of T. Mullins, chief clerk City Passenger Agent's office, C.P.R., Toronto.

Barlow Cumberland, Vice-President Niagara Navigation Co., in his capacity as Vice-President of the Ontario Historical Society, gave an interesting address on the Preservation of Historical Sites, before the Women's Wentworth Historical Society, Hamilton, Ont., Nov. 28.

Jno. Adams, London, Ont., one of the oldest locomotive engineers in Canada, having entered the service of the old Great Western Ry. in 1855, and who recently retired, was driver of the first train which crossed the first suspension bridge across Niagara River in 1856.

M. McD. Duff, of the C.P.R. Atlantic Steamships Department, was presented with a quantity of cut glass, an electric lamp and a gold clock, by members of the staff, upon the occasion of his marriage. The presentation was made Dec. 3, by A. Piers, Manager C.P.R. steamships.

C. W. P. Ramsey, who has been appointed Acting Division Engineer of Construction C.P.R., at Montreal, was engaged on transit work for the division until Jan., 1906, when he was taken into the office as assistant to the late H. L. Jordan, and was in charge of the work during Mr. Jordan's illness.

Jas. Porteous, sr., who died at the home of his eldest son, Jas. Porteous, jr., at Carlisle, Eng., Nov. 23, aged 82, was the father of W. M. Porteous, Freight Agent C.P.R., St. Louis, Mo., and brother of the late Jno. Porteous, formerly General Freight Agent G.T.R. and General Manager National Despatch Fast Freight Line, Boston, Mass.

E. A. Cunningham, who was from 1885 to 1900 connected with the C.P.R. General Stores Department at Montreal, and who has for the last six years been purchasing agent and storekeeper for the Alberta Ry. and Irrigation Co. at Lethbridge, Alta., has resigned to go into lumber and builders' supply business, at Lethbridge, with Mayor Rogers.

C. L. Hervey, Divisional Engineer, National Transcontinental Ry. survey, was presented with a dressing case by the members of the staff of his division—headquarters Reed's Camp, near Quebec—Dec. 14; and on the following day, A. M. Morrison and W. Chisholm, resident engineers of the same division, were presented with pipes by the staff.

J. D. Morton, latterly accountant for Mackenzie, Mann & Co., Bridgewater, N.S., in connection with the construction of the Halifax and Southwestern Ry., has been placed in charge of accounting for the Canadian Northern Ry., and allied companies, at the head office in Toronto. Mr. Morton was at one time accountant on construction for the Manitoba and Northwestern Ry.

J. R. Marlow, Manager Transportation Department, Canadian Manufacturers' Association, has resigned to become sales manager for the Canada Cycle and Motor Co., Toronto Junction, Ont. Before transferring his services he will close up as far as possible the freight rate matters pending before the Railway Commission. Mr. Marlow will be succeeded by J. E. Walsh, formerly in the Canada Atlantic Ry.'s service at Ottawa.

H. W. Harding, who has been appointed Local Secretary of the Canadian Northern Ry. in London, Eng., was born there June 6, 1869, and entered railway service Feb., 1883, as clerk in the London, Brighton and South Coast Ry. offices. After passing through various departments of the Accountant's office he was appointed in 1891 to the staff of the Secretary of the company, upon which he remained until appointed to his present position.

G. W. Alexander, who has been appointed Local Treasurer G.T.R. lines west of Detroit and St. Clair rivers, has been connected with those lines since 1880, first as private secretary to the then General Manager at Port Huron, Mich.; subsequently as Assistant to the Treasurer, moving to Detroit when the financial and accounting departments of the Western Lines were merged in 1885, and for the past eight years has been Paymaster. He was born at Lightcliff, Yorkshire. Eng., Sept. 10, 1859.

C. W. Cooper, who has been appointed Assistant General Passenger Agent Canadian Northern Ry., was born at Montreal Nov. 16, 1868; entered railway service Feb. 24, 1885, in the G.T.R. Passenger Department, and became secretary to D. McNicol, then General Passenger Agent C.P.R., in 1892, and served for a time in the Montreal and Ottawa ticket offices. In 1901 he joined the staff of the Canadian Northern Ry. as chief passenger clerk, serving in that capacity until his present appointment.

Geo. Stephen, who has been appointed Assistant General Freight Agent Canadian Northern Ry., Winnipeg, entered the service of the C.P.R. as junior clerk in 1889 and was transferred to Winnipeg in 1899 as chief clerk to the Assistant General Freight Agent, becoming Travelling Freight Agent of the C.P.R. Manitoba lines, 1900. In 1901 he was appointed contracting freight agent C.P.R. at Nelson, B.C.; and in 1903, left the C.P.R. service to become chief clerk to G. H. Shaw, General Traffic Manager, Canadian Northern Ry., Winnipeg. He was born at Montreal, July 5, 1876.

G. B. Burchell, who has been appointed General Manager Canada Coal and Rd. Co. at Joggins Mines, N.S., was born at Sydney, N.S., Nov. 1, 1877, is a B.Sc. of McGill University, Montreal, and is a mining engineer. He was engaged in mining work in the western States, and on returning to Canada, was in charge of the Cape Breton Coal Mining Co., which operated 1¾ miles of railway, and from July, 1903, to Oct., 1906, was Manager of the Gowrie and Block House collieries, Port Morien, N.S., in connection with which he had charge of the chartering of vessels.

W. J. Jackson, who has been appointed General Manager Chicago and Eastern Illinois Ry., was born at Toronto in 1859, and entered the service of the G.T.R. as a machinist's helper in the Toronto shops in 1877. In the following year he entered the G.T.R. freight office in Toronto as a clerk, going to the Chicago and Grand Trunk Ry. in 1882 as chief claims clerk at Chicago. In 1885 he was made general freight foreman on that line, and in 1890 assistant general agent, also at Chicago. In the following year he entered the service of the Chicago and Eastern Illinois Ry., of which he is now general manager.

W. B. Bulling, whose portrait appears on the first page of this issue, was born in Montreal, Sept. 16, 1858, and his first railway experience was with the G.T.R., which service he entered in 1872 in that city. He resigned in 1880 to accept a position with the Chicago and North-Western Rd. in Chicago, in which employ he remained, however, only a short time, returning to the staff of the G.T.R. In 1883 he was appointed chief clerk of the general freight department of the C.P.R.; in 1889 he was appointed District Freight Agent, in 1892 General Freight Agent of the Eastern Division, and in July, 1901, Assistant Freight Traffic Manager of Eastern Lines, comprising all lines east of Fort William and Detroit to Quebec and St. John, N.B.

Dinner to Mackenzie and Mann.

Under the auspices of the Toronto Board of Trade, W. Mackenzie, President, and D. D. Mann, Vice-President, of the Canadian Northern Ry., were entertained at dinner in Toronto on Dec. 14, by a highly representative gathering of prominent citizens. Among those at the table of honor, in addition to the two guests, the President of the Board of Trade, who occupied the chair; the Lieutenant-Governor of Ontario, the Premier of Ontario, the leader of the Provincial Opposition, the Mayor of Toronto, Z. A. Lash, D. B. Hanna, F. Nichols, R. J. Mackenzie, W. H. Moore, A. W. Mackenzie, L. Lukes and C. W. Spencer.

W. Mackenzie, in replying to the toast of the evening, expressed thanks for the honor extended to him and his colleague and asked to be excused if he referred often to his manuscript, for he said: "This is so different to railroading." Continuing, he said Mr. Mann and himself were proud that they were Canadians, but, while that was so, they should not be too provincial. Canada was a great country, and greater in its possibilities and resources than any country in the world. But it required men and money to develop them, and if investments were directed into the right channels, the development would be enormous. In this connection Mr. Mackenzie spoke gratefully of the assistance given to the Canadian Northern Ry. by the investing public of the United Kingdom. "I am pleased to be able to inform you," he said, "that the investing public of Great Britain take a keen interest in Canadian affairs, and that Canadian securities are growing in their appreciation. That has been shown in a practical way by the taking of all the securities the Canadian Northern Ry. had offered them." This was peculiarly gratifying when it was remembered that London was the financial centre of the world, and the British investor had the world to choose from. Mr. Mackenzie spoke of the great growth of immigration into Canada from 49,000 in 1900, to 189,000 in 1905, the total for the six years being 710,000, of whom 273,000 were from Britain and 240,000 from the U.S. Most of these settlers had gone into Manitoba, Saskatchewan and Alberta, and the speaker dwelt upon what this meant to the west and to Canada generally. He expressed the opinion in this connection that the day of total crop failures in the west had passed. The area under cultivation was so large and the crops so varied that if there was a failure in one section it would not affect the other sections. An allusion was made to the tremendous growth of trade of the country, and of Toronto in particular, and passing on he paid special attention to the Canadian Northern Ry.

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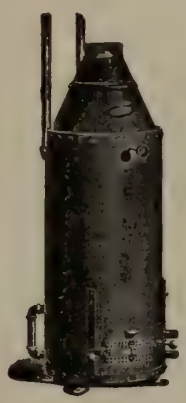

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WRITE FOR DESCRIPTIVE MATTER.

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Dealing with the question of subsidies, he said that there was an erroneous impression that the company had received great assistance in that way. This was not the case. In Manitoba, Saskatchewan and Alberta they had constructed 2,255 miles of railway. From the Dominion Government they had received for that only $385,600 in cash and 2,616,960 acres of land. This acreage was a portion of land granted in the eighties to the Hudson's Bay Ry. when the land was not so valuable, and considerable of it was sold at its low value at that time. From the Dominion Government there had been received for the lines in Ontario $2,607,326, and from the Provincial Government $671,000 for the James Bay Ry., now part of the C.N.R. Taking the mileage, the C.N.R. had received less proportionately in Government aid in cash and lands than any other railway in the country. The Provincial guarantees of the bonds were of course of great help in financing the road, but the signing of these guarantees had not cost the different Governments a single cent. "We have been able to earn the interest on these roads as they are constructed," said Mr. Mackenzie, "and a great deal of the credit for that is due to our Third Vice-President, D. B. Hanna."

Mr. Mackenzie said it was less than three weeks since the new Canadian Northern Ontario Ry.'s line had been completed from Toronto to Parry Sound. They had been delayed by injunction and other proceedings from getting into the terminals, and that had only been just accomplished, enabling them to accept freight for carriage over the road. The line was now graded through to the famous Hutton iron range, 300 miles north of Toronto, which was now being developed. People from the U.S. who understood these questions told him that the developing of these mines would in course of time enable the establishment in Toronto of blast furnace rolling mills, steel mills, etc., and getting their raw material from the Hutton mines. The city would then be the manufacturing point in steel and iron for all the territory now tributary to it. He asked if it was in the interests of Toronto to have the Canadian Northern lines stationary or to continue them into the great country beyond, into what is commonly called the great clay belt of northern Ontario, lying between Lake Superior and James Bay. He spoke of the immense possibilities of this region, which surveys showed to be a timbered plateau full of agricultural possibilities, and urged that it was the duty of the Government to assist in every legitimate way in having it developed and thrown open for settlement.

"We have altogether a little over 4,000 miles of road," he continued, "distributed in Nova Scotia, Quebec, Ontario and the three western Provinces. We hope at no distant day to be able to connect this system up and to afford transportation for the products of the east to the west, and from the west to the seaboard. Some gentleman asked what about the west; I presume he meant west of Toronto. We expect in the near future to have our line from Quebec to Ottawa, and so soon as we are able to finance our line from Ottawa to Toronto we intend to put it in construction. Then it will be necessary to get to the manufacturing places in Ontario. Of course our plans are not fully matured and we are asking now for the necessary charters from Parliament. We hope in the near future to be able to lay down our lines to the different manufacturing centres of Ontario at least."

In conclusion, Mr. Mackenzie expressed his thanks for the material assistance rendered their enterprises by the Canadian Bank of Commerce. The bank had never been subjected to any risk in carrying their account, but the generous manner in which every reasonable facility had been afforded entitled the institution to their warmest thanks.

D. D. Mann, after expressing his appreciation of the honor conferred upon Mr. Mackenzie and himself, declined to consider it a personal tribute. It was paid by commerce to transportation. "While Mr. Mackenzie and myself," he said, "assumed the responsibility and care of the construction of the Canadian Northern Ry., credit is due to many, from the youth who trailed the surveyor's chain across the plains to the men at the head of the greatest banking institutions in Canada. In 1896, just ten years ago this month, we commenced to build the first 100 miles of the Canadian Northern Ry. To-day we have just 3,000 miles of railway in western Canada, or, in other words, sufficient mileage to more than reach from Montreal to Vancouver. In eastern Canada we have 850 miles of railway, making a total of about 3,800 miles, or we have constructed and acquired more than an average of a mile a day during the past ten years. The country tributary to the main line of the C.N.R. from a point about 50 miles east of Winnipeg, through the Provinces of Manitoba, Saskatchewan and Alberta, to the foothills beyond Edmonton, a distance of nearly 1,000 miles, is practically all a wheat-growing country. Every station on this portion of the line, with the possible exception of two, will be wheat-receiving stations. There is an abundance of natural rainfall and a soil as rich as any in the world. During these ten years we have established in western Canada 132 new towns, with a population of 65,000 people; that is, we have located this number of towns along the line of our railway, giving them a name, surveying and naming their streets, and, considering that the majority of these new towns are only from one to two years old, this will give you an idea of how western Canada is developing Of course, this is exclusive of the farming population tributary to these towns, and does not include the increased population in the towns and cities where there is more than one line of railway, such as Winnipeg, Port Arthur, Fort William, Brandon and Edmonton. During the last fiscal year homestead entries in the west have numbered 50,000, which at, say, 160 acres to each person, means that 8,000,000 acres have been taken as free homesteads. Government statistics show that during the last five years the population of the three Prairie Provinces has increased from 419,000 to 806,000, a gain of 92%.

"The great bulk of traffic originating on our western lines is grain, and the products of grain, eastward bound, and it is important that we should have our own line of railway into the industrial points in the east, to gather return cargoes for these grain cars westward bound. With this object in view we are building from Toronto to Moose Mountain, 300 miles, via Parry Sound, the mouth of French River and Sudbury. We intend to extend this line to Port Arthur, dividing the country between the C.P.R. and the G.T.P. We are also building between Quebec and Montreal, Montreal and Ottawa, and intend to connect Toronto with Montreal in the near future. It is also our intention to build westward through to the Pacific coast, making a continuous line of railway from tidewater to tidewater. I think I have said enough about railway enterprises, but I wish to impress upon you that it is only by having through lines from east to west and branches reaching to all industrial centres in the east that the internal trade of this country can be developed. Great as the prospects are for the future development of the west, there is no reason why Ontario should not continue to maintain the first place among the Provinces of Canada. While reaching out for trade in foreign markets be mindful of the fact that manufacturers in other countries are reaching out for the trade of your home market.

"We have established our head offices in Toronto. Up to the present we have had our clerical staff located here, but with the completion of the Canadian Northern Railway and the branching out of other roads from this city you will have the benefit of repair shops and other works, which will add materially to the population and trade of the city of Toronto."

Z. A. Lash, K.C., Premier Whitney, Hon. G. W. Ross, M.P.P., Mayor Coatsworth and B. E. Walker, General Manager of the Bank of Commerce, also spoke.

National Transcontinental Railway.

The report of the National Transcontinental Railway Commission for the year ended June 30, was presented in the House of Commons Dec. 10. The total expenditure for the year was $1,831,263, of which $352,191 was paid to the G.T.Pacific Ry. for surveys from Winnipeg eastward. There were 18 casualties in the survey parties during the year, chiefly from drowning. When District Engineer Almon and Transitman White, of section C, in the eastern district of Quebec, were drowned, the rest of the party refused to remain in the field. They were sent to their homes and a new party organized. The report of the surveys in District E, which extends from Abitibi to Peninsula Crossing, the point of junction with the Lake Superior branch G. T. Pacific Ry., to which point the Eastern Division (National Transcontinental Ry.) is under construction from Winnipeg, shows that 14 bridges of considerable magnitude will be required. Five of these will be 500 ft. long, and one 700 ft.

The report of the Chief Engineer, H. D Lumsden, which is incorporated, reaffirms the statements previously made that the gradient from Winnipeg easterly to the Atlantic seaboard will not exceed 0.4%, and westward the gradient will not exceed 0.6%. The curvature for the most part will be kept down to a minimum of 1,433 ft., except in a few cases where the radius is 955 ft.

The question of the route of the line into Moncton has not been finally settled, but a St. John despatch, Dec. 19, says, unofficial information indicates that the reports of the engineers favor what is known as the central route, reaching Chipman practically in a straight line, instead of along the valley of the St. John River. The central route is said to be somewhat shorter than the river route, offers better gradients and presents fewer obstacles to construction. Replying to questions in the House of Commons on the subject the Premier said the preliminary location surveys for the Quebec-Moncton section of the line had been made, and a portion of the revised survey, but the reports had not come to hand. With regard to the re-survey of the proposed routes from Grand Falls to Moncton, N.B., the Commissioners had not made any recommendation as to routes. The engineers of District A reported in favor of the back line, and preliminary surveys were completed between Moncton and Grand Falls, as the shortest and cheapest, but before finally deciding this matter it was considered advisable to have the first location made over both routes. This had been done and plans and estimates are expected to be furnished shortly.

The Chairman of the Commission stated in Quebec, Nov. 29, that the Commissioners expected by the end of Dec. to be in a position to ask for tenders for the construction of about 450 miles of line. Of this mileage, 50 miles would be from Levis, Que., southerly 100 miles from Moncton, N.B.; 40 miles northwesterly from La Tuque, Que.; and 150 miles from Abitibi.

The Minister of Railways spent Christmas in New Brunswick and a Moncton dispatch of Dec. 26, which was probably inspired, said:

WINTER TRANSCONTINENTAL SERVICE

1906
FALL CHANGE
OF TIME

DEPARTURE TIMES FROM TORONTO:

1.45 p.m. daily, "Western Express," for Winnipeg and the West runs as far as Calgary only.

11.30 p.m. daily, "Pacific Express," for Winnipeg, the North-West and Vancouver.

EASTBOUND, "Eastern Express" from Calgary, "Atlantic Express" from Vancouver.

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General Passenger Agent
MONTREAL

C. B. FOSTER,
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"Advertisements will be issued this week, calling tenders for constructing portions of the eastern section of the Transcontinental Ry. between Moncton and Levis. Besides asking tenders for the sections between Levis and the New Brunswick frontier, tenders for constructing the following sections of the National Transcontinental Ry. will be solicited: From Moncton towards Chipman, 50 miles, will be the first section. The road will enter Moncton from north of Steeves Mountain and run almost parallel with the I.C.R. from east Berry's Mills. Tenders will also be called for the section in New Brunswick for a distance 62 miles from Quebec frontier towards Grand Falls. The route will be down to Baker's Brook and thence along the St. John River valley to Edmundston and following the valley to about 2½ miles from Grand Falls. Between the two sections named there will be in New Brunswick three additional sections, each 50 miles, tenders for constructing which will be called early in the spring, or as soon as the question of route has been finally determined."

The position of construction upon the line easterly from the Quebec bridge, shows that on the seven miles to Cap Rouge, a considerable amount of rock cutting will have to be done during the winter. The granite piers of the viaduct at Cap Rouge have been completed, except the two eastern ones, one of which is caisson work. The section from Cap Rouge to Belair, 13 miles, where a connection is made with the C.P.R., is expected to be completed by June. On the 14 miles between Belair and Jacques Cartier River, the grading is nearly completed, and it is expected that tracklaying will be commenced in the spring. The section from Jacques Cartier River for 33 miles is also well advanced, and the masonry work for the bridge across St. Anne's River is finished. The work on the other 127 miles to La Tuque is well advanced, and the abutments of nearly all the bridges are completed.

GRAND TRUNK PACIFIC RY.

The Vice-President and General Manager stated in an interview at Winnipeg, Dec. 18, that he was well satisfied with the work that had been done on the road during the past year. About 80% of the work the company set out to do during the year had been completed, and preparations had been made for larger works during the coming season. It was anticipated that not only would the arrears of 1906 be made up in 1907, but the whole of the work laid out for the year would be completed. The company was taking every precaution to provide against any scarcity of labor during the summer, such as there was during 1906.

Plans have been submitted for the approval of the Government for the line from Edmonton, Alta., through the Yellowhead Pass to Prince Rupert on the Pacific coast. The plans show the line over the summit of the Rocky Mountains will have a gradient of 0.4% and that no heavier gradient will be required to the ocean. The profile accompanying the location plans shows that there will be some heavy cuts and deep fills to ensure a line with so low a gradient. Engineers who are familiar with the Yellowhead Pass state that it is wide enough to provide routes for several lines.

Reports from Prince Rupert state that during the year five acres of land have been cleared and stumped; the whole district has been surveyed, and a hydrographic survey made of the harbor. The harbor is 16 miles wide, with a good entrance, straight and deepfor a width of over 2,000 yds., the water in the harbor averaging 25 fathoms in depth.

Canadian Northern Railway Construction.

Canadian Northern Quebec Ry.—The grading upon the cut-off from near Garneau Jct. has been finished to the crossing of the Batiscan River at St. Stanislas, Que., 12 miles. From this point to the crossing of the Charest River, 8 miles, the grading was expected to be finished at the end of Dec., with the exception of a few small cuttings. About half the grading has been completed on the section between the Charest River and the crossing of Ste. Anne River, at St. Casimer, 6 miles. Work is to be carried on continuously during the winter, unless the weather becomes too severe. Between the points mentioned there is considerable bridge work to be done, the substructures at the Ste. Anne and Batiscan Rivers are well under way.

We have since been advised that tracklaying has been started on the line from Garneau Jct., on the old Great Northern Ry., into Quebec, 8 miles; and on the line from St. Jerome, on the same line, to Morin Flats, Que., on the old Montford and Gatineau Colonization Ry., about 15 miles. The contractors are O'Brien and Mullarkey, Montreal.

In addition to the construction work on hand, there is projected a line from Montford Junction to Morin's Flats, Que., about 5 miles.

The point of junction of the old Great Northern Ry. with the National Transcontinental Ry., now known as Tawachiche, has been changed to Hervey Junction, and the station at Reed's Camp, where the headquarters of the N.T. Ry. survey parties have been located, has been closed.

Canadian Northern Ontario Ry.—The grading on the line between Hawkesbury and Rockland is practically ready for the rails. On the section between Rockland and Ottawa, the right of way has been laid out, and everything is in readiness for an early start at grading in the spring. The line into Ottawa, it is expected, will be completed and in operation early next fall.

The plans for the line from Ottawa into Toronto have been filed and show a route between the two points about 60 miles shorter than the present G.T.R. or C.P.R. lines. From Ottawa the line will run southwesterly as far as Cobourg, from which point it will parallel the G.T.R., and after passing about midway between Brooklin and Whitby will touch the lake near Dunbarton. It will reach Wetburn south of the G.T.R. tracks, cross Kingston road south of Norway and Queen St., Toronto, to Ashbridge's marsh, run along the north shore of the marsh to the Don, then northerly with a slight curve until it reaches the tracks upon which it will enter the Union Station limits. The approval of the Toronto Board of Control has been asked for the plans within the city limits.

The plans for the line from Ottawa to Key Inlet have also been filed, and have been approved of in part by the Board of Railway Commissioners. The plans show a line from Ottawa to Fitzroy harbor, then crossing the Ottawa River, running very close to Norway bay, Bristol and Portage du Fort. At this point it recrosses the river and cuts across the peninsula, of which Beachburg is the centre. Thence the line passes about 10 miles to the south of Pembroke, and traverses the height of land to Key Inlet, Georgian Bay.

Canadian Northern Ry.—The C.N.R. boiler room wing of the Winnipeg repair shops was destroyed by fire Dec. 7. The total loss, including a locomotive undergoing repairs, and the machinery, is estimated at about $100,000.

Plans have been filed at Ottawa for an extension from south of Neepawa, Man., to the point where the Edmonton line crosses the South Saskatchewan River near Saskatoon, Sask.

A survey is being made for a line from Battleford northeasterly to Prince Albert, the object of which is to connect the two main sections of the line, and so provide a short line from Edmonton with the line under construction towards Hudson Bay. Of this line, which starts at Etiomami, Sask., track has been laid for 43 miles, and the grading for the remaining 46 miles to Pas Mission has practically been completed. This will be finished and the line opened for traffic next season. The survey parties were reported to be still in the field between Pas Mission and Fort Churchill, at the end of Dec.

The steamboat Woods entered Fort William harbor on Christmas Day, having been towed from Port Arthur. This is the first instance of a steamer getting into Fort William so late in the season.

The C.P.R. overseas mail train made its first run from St. John, N.B., to Vancouver, B.C., with the China-Japan mail, in 86 hours 55 minutes, the run from Montreal to Vancouver being accomplished in 75 hours.

The Intercolonial Ry., with a view of effecting a speedy delivery of mails and passengers between the trans-Atlantic steamers and Montreal, has put on a special train to run from Halifax, N.S. The first train made the run in 22 hours, but it is expected to cut this time to 20 hours or less.

Hon. R. L. Borden has given notice in the House of Commons that he will move for the appointment of a select committee to enquire into the management and operation of the Government railways, and whether it is feasible to establish a better system of administration, free from the influence of party politics and based on sound economic and business principles.

The Brotherhood of Maintenance of Way Employes concluded its annual convention at Toronto, Dec. 6. The officers elected for the current year include A. B. Lowe, Kingston, Ont., First Vice-President; A. F. Stout, Ivanhoe, Ont., Third Vice-President. The first named was also elected Chairman of the Executive Committee. The next convention will be held at New Orleans, La.

The car line committee which will have charge of the new per diem arrangement agreed upon at the recent meeting of owners in Chicago, Ill., consists of A. Hale, General Superintendent of Transportation, Baltimore and Ohio Rd.; F. A. Delano, President, Wabash Rd.; and J. Kruttschmitt, Director of Operation and Maintenance, Southern Pacific and Union Pacific. The new per diem charge is 50 cents a day, and the penalty for holding cars more than 30 days has been abolished. The new charges become effective Jan. 1, but do not affect all railway companies signing the original agreement.

A proclamation has been issued by the Governor-in-Council under the terms of sec. 6a, which was added to the Railway Act, 1903, by sec. 2, chap. 32, of the Dominion Statutes of 1906, confirming acts of the Ontario and Manitoba Legislatures dealing with the prohibition or regulation of labor upon the first day of the week, commonly called Sunday, as follows: Sec. 193 of the Ontario Railway Act, 1906, and so much of sub-section 4, sec. 197 of the same act as provides that no park or pleasure ground within the the purview of said subsection 4 shall be used for games, picnics, concerts, excursions or other public entertainments on Sundays; and sec. 22a of chap. 51 of the acts of the Legislature of Manitoba of the last session

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SAULT STE. MARIE, ONTARIO

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Parties intending purchasing will find it to their interest to let us have their specifications at an early date so as to ensure desired deliveries.

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Passenger, Freight and Electric Railway
Ruggles' Rotary Snow Plows
Car Castings, Forgings and Repair Parts

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REINFORCED CONCRETE

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E. A. WALLBERG, Pres't — Merchants' Bank Building, MONTREAL

TRANSPORTATION APPOINTMENTS.

Alberta Ry. and Irrigation Co.—E. A. Cunningham, Purchasing Agent and Storekeeper, has resigned.

Algoma Central and Hudson's Bay Ry.—C. L. Vaughan, Car Accountant and Trainmaster, has resigned.

P. Robinson, heretofore Chief Dispatcher, has been appointed Trainmaster and Chief Dispatcher. Office, Sault Ste. Marie, Ont.

D. J. Graham has been appointed Car Accountant. Office, Sault Ste. Marie, Ont.

Canadian Northern Ry.—O. H. Clarke, K.C., has been appointed solicitor at Winnipeg for the company's western lines. Munson, Allan, Laird and Davis will continue to act as counsel for the lines west of Lake Superior.

Canadian Pacific Ry.—I. Roth, travelling passenger agent, has been transferred from Quebec to St. John, N.B., for the winter.

W. Stitt, heretofore General Agent, Canadian Australian Steamship Line, Sydney, N.S.W., has been appointed General Passenger Agent, Eastern Lines, C.P.R., vice C. E. E. Ussher, promoted. Office, Montreal.

F. B. Zercher has been appointed foreman passenger car shops, Angus, Montreal, vice C. F. Rydberg, promoted to be Superintendent of the car shops.

Jules Hone, jr., now deals with passenger business only and has the title of City Passenger Agent at Quebec, instead of City Passenger and Freight Agent as formerly.

A. Marchessault has been appointed travelling fireman for the Eastern Division, with headquarters at Montreal.

A. J. Holtby, heretofore locomotive foreman at Cartier, Ont., has been transferred to Ottawa, Ont., vice T. Hudson, resigned.

The Ontario Division has been divided into three districts instead of two. District 1 comprises main line from Smith's Falls to Leaside Jct., with branch from Burketon to Bobcaygeon, J. R. Nelson, Superintendent, Toronto. District 2 consists of the London and Windsor sections, Ingersoll, Port Burwell and Goderich branches, C. Murphy Superintendent, with office at London instead of Toronto, as heretofore. W. A. Killingworth, Chief Dispatcher, has also been removed from Toronto to London, with two sets of dispatchers. District 3 comprises the Owen Sound section, the Orangeville, Teeswater, Wingham, Elora and Muskoka branches, the Hamilton section and Toronto terminals. A. L. Smith, heretofore Inspector of Train Dispatching, has been appointed Superintendent, with office at Toronto.

E. A. Freeman has been appointed locomotive foreman at Cartier, Ont., vice A. J. Holtby, transferred to Ottawa, Ont.

M. J. Gorman has been appointed travelling fireman for the Lake Superior Division, with headquarters at Schrieber, Ont.

C. E. E. Ussher, heretofore General Passenger Agent, Eastern Lines, Montreal, has been appointed Assistant Passenger Traffic Manager Western Lines. Office, Winnipeg.

W. A. Wells has been appointed travelling passenger agent at Winnipeg, vice C. A. Folwell, transferred to Vancouver ticket office.

D. E. Brown, heretofore General Agent for China, Japan, etc., at Hong Kong, has been appointed General Superintendent Trans-Pacific Steamship Service. Office, Vancouver, B.C.

J. M. Griffin is reported to have been appointed District Freight and Passenger Agent at San Francisco, vice M. M. Stern, resigned.

D. W. Craddock, heretofore chief clerk in the office of the General Agent for China, Japan, etc., has been appointed General Traffic Agent for China. Office, Hong Kong.

Central Ontario Ry.—The position of Receiver, held by Geo. Collins, Manager, has been abolished.

Grand Trunk Ry.—J. W. Farrell, heretofore Train Dispatcher, has been appointed Chief Train Dispatcher at Island Pond, Vt., succeeding E. A. Cabana, resigned.

G. Mansfield has been appointed chief clerk to the local freight agent at Toronto, succeeding W. E. Ireland, resigned to enter the Canadian Northern Ontario Ry. service.

W. Armstrong, heretofore train dispatcher, has been appointed Chief Train Dispatcher at St. Thomas, Ont., succeeding J. A. McLardy, promoted.

G. W. Alexander, heretofore Paymaster, has been appointed Local Treasurer for lines west of Detroit and St. Clair rivers, vice J. H. Muir, deceased. He has also been appointed to the several positions held by Mr. Muir with the individual companies forming the western portion of the system, viz.: Secretary and Treasurer G.T. Western Ry. Co., Detroit, Grand Haven and Milwaukee Ry. Co., Toledo, Saginaw and Muskegon Ry. Co., G.T. Junction Ry. Co., Grand Rapids Terminal R.R. Co., and G.T. Milwaukee Car Ferry Co., and Secretary Chicago, Detroit and Canada G.T. Junction Ry. Co., Michigan Air Line Ry., St. Clair Tunnel Co., and International Bridge Co. Office, Detroit, Mich.

The following agents have been appointed: Richmond, Que., J. J. Anderson; St. Madeline, Que., A. J. Bellisle; Beaconsfield, Que., A. E. Alguire; Kingston (Freight), Ont., C. Summerby; Mariposa, Ont., D. F. Milloy; Craigville, Ont., C. Gordon; Barrie and Allandale, Ont., A. Donnelly (acting); Washago, Ont., P. W. Hancock; Sundridge, Ont., W. G. McCormack; Colwell, Ont., T. A. Wickett; Ridgeway, Ont., J. T. Cameron; Port Rowan, Ont., W. G. Livingstone; Hickson, Ont., A. Clark; Neustadt, Ont., A. J. Madjett; Newton, Ont., F. Newman; Barrys Bay, Ont., H. B. Partridge; Rose Point, Ont., J. Beaton.

Huntsville, Lake of Bays and Lake Simcoe Navigation Co.—W. Duperow, General Manager and Secretary, has resigned. S. H. Jacobs, heretofore Assistant General Manager, has been appointed General Manager, with charge of operation of the steamboats. W. J. Moore, heretofore with the Rathbun Co.'s mills at Gravenhurst, has been appointed Secretary, with charge of office and transportation business. J. McKee has been appointed Treasurer. Office, Huntsville, Ont.

Intercolonial Ry.—E. H. Allen, Claims Agent, is reported to have resigned.

National Transcontinental Ry.—T. S. Armstrong, Assistant District Engineer, District E, Kenora, Ont., has been appointed District Engineer at Nepigon, Ont., succeeding the late C. E. Perry.

J. A. Heaman, engineer in charge Division 5, District E, has been appointed Assistant Division Engineer.

New York Central Lines.—The following appointments have been made: C. J. Grammar, Vice-President in charge of Freight Traffic; C. F. Daly, Vice-President in charge of Passenger Traffic; and J. A. Place Vice-President in charge of legal matters.

C. F. Daly has also been appointed a Vice-President, Lake Shore and Michigan Southern Rd., and the Michigan Central Rd., with charge of the passenger departments.

A. H. Harris, heretofore General Counsel N.Y.C. Lines, has also been appointed a Vice-President of the L.S. and M.S. Rd., and M.C. Rd., with charge of the law departments.

H. B. Mitchell, heretofore Freight Traffic Manager, N.Y.C. Lines West, Chicago, Ill., has been appointed Freight Traffic Manager N.Y.C. Lines East, with office at New York City.

Wabash Rd.—C. H. Stinson, heretofore chief clerk to the General Traffic Manager, has been appointed Assistant General Freight Agent, with charge of fast freight lines, succeeding F. E. Signer, resigned.

Alberta Railway and Irrigation Co.

At the annual meeting in London, Eng, recently, Col. K. R. B. Wodehouse Vice-President, who was in the chair, in opening the meeting, said he regretted to inform the shareholders that the health of the President, E. T. Galt, had been severely impaired for some time past and it was impossible for him to be present. He was under medical treatment and it would be some considerable time before he was able to resume the cares of office. He was sure shareholders would share the sympathies of the directors and endorse the hope that the company would soon have the President again at the helm of affairs, fit and strong. Referring to the accounts, which were published in full in our Dec. issue, the Vice-President said, under the heading of liabilities to the Dominion Government, there was $514,583 due in respect of the 500.000 acres of land taken over at the time of the amalgamation; as to the item of sundry creditors, $384,372, the principal items were Brainerd-Cobley land suspense account, $45,908; interest on prior lien and 5% debenture stocks payable July 1, 1906, $85,162, and various railway companies, $92,565. There was the land suspense account of $433,548. On June 30 the company had 762,186 acres of land remaining unsold, of which 155,000 were irrigable and 607,186 non-irrigable. The minimum selling price had been increased to $20 an acre for irrigable and $5 an acre for non-irrigable lands. The amounts received from the land sales are treated as follows: First, there are the free lands which were taken over from the old irrigation company. The inventory price of $4 is first deducted, then the balance remaining is divided; 50% is placed to a reserve account, which is intended to meet any loss arising by sales below the inventory price. The remaining 50% is carried to revenue suspense account. The amount of this latter is carried to revenue as received in cash. Secondly, there are the trust lands—namely, lands covered by the trust deed. All money received for these must eventually go towards redeeming the debentures. The estimated net profit resulting from all these land sales amounted during the year to $343,960.03, and that after deducting $32,836 23 for commission and land expenses, which are all charged in the first year, the portion applicable to this year's revenue was represented by $4,587.79, now carried to the revenue account, the balance remaining in reserve to be dealt with as outstanding instalments are received. The company has an interest with the C.P.R. in the disposal of 100,000 acres belonging to that company, of which there have been sold during the past year 57,920 acres, earning the A R. & I. Co. a profit equal to $2.10 an acre. After having gone over the figures on the assets side of the account, the Vice-President referred to the gift by the company of a site of 320 acres near Lethbridge, to the Dominion Government for an experimental farm, and concluded by moving the adoption of the report and the statement of accounts. This was seconded by W. Burdett-Coutts, M.P., and agreed to.

Col. Wodehouse was re-elected a director by special resolution, and by a second resolution the following directors were re-elected: E. T. Galt, A. M. Nanton, E. S. Clouston, J. Galt, W. Burdett-Coutts, M.P.; J. H. Dodgson, W. M. Ramsay and E. Waterhouse. The resolution as to these latter directors was seconded by C. Lock, who in the course of his remarks said: "I have been connected with this company from its very inception, and I know what a dark and dreary time it passed through for the shareholders, and all who were interested in it in its early history. I know also that the present position is due entirely to the initiative of those directors

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who were on the Board then. We have had some new ones appointed since, but our present position is due to the foresight and acumen of those directors. Our property consists of a colliery and a large tract of prairie, which was practically unmarketable, and with which nothing could be done. Those gentlemen conceived the idea of tapping the waters of the adjacent rivers, and irrigating the property, with the result that land which was unsaleable at any price has been converted into property selling at $13, and now at $20. On the prairie the back-land has been rendered somewhat more accessible and valuable for agriculturists and pastoralists. These results are due, in my opinion, entirely to the conception of the irrigation scheme, and the credit for that scheme rests on the shoulders of Mr. Galt and the gentlemen who sit here."

The remuneration of the directors for the year ended June 30, 1906, was fixed at £2,000, and a similar amount was voted then for the current year.

The C.P.R. has inaugurated a fast freight service, leaving Toronto Junction, Ont., every Monday at 11 p.m., and reaching St. John, N.B., at 3.30 p.m. Thursday, in connection with the winter sailing of steamers from that port.

The Ontario Railway and Municipal Board has decided that a steam railway is not liable for the business tax under the Ontario Assessment Act. The decision was given upon the appeal of the C.P.R. against the assessment of its property in Galt, Ont.

F. H. McGuigan, Fourth Vice-President G.T.R., has been elected a member of the Executive Committee of the Bureau for the Transportation of Explosives. This committee will act until the annual meeting, which it was decided should be held in Feb.

During the visit of the Canadian Ticket Agents' Association to Mobile in November H. G. G. Donald, lumber exporter of that city, formerly of St. John, N.B., and a brother of J. W. Donald, D.P.A., Chicago, Alton Rd., Detroit, Mich., entertained a party of members of the association and their wives, giving them a trip in his steamer around the harbor.

The C.P.R. has decided to introduce Japanese attendants on its transcontinental trains between Montreal and Vancouver, for the purpose of rendering similar services on first and second-class cars as are rendered by the porters on sleeping cars. This will relieve the brakemen of certain of the duties now discharged by them and enable them to give their undivided attention to the working of the trains.

The Ottawa Valley Development Co. is the title under which an act of incorporation is being asked at the current session of the Dominion Parliament by interests represented by O'Meara and MacInnes, solicitors, Ottawa. The company desires to have power, among other things, to construct tramways or electric railways, telegraph and telephone lines, wharves and docks, and to carry on a general navigation business.

Steam Railway Track Laid in 1906

In accordance with our annual custom circulars were sent in December to all railway companies in Canada, asking particulars of track laid during 1906. Below is a compilation of figures received, showing that the total length of new track, exclusive of second track and sidings laid during the year on steam railways from which reports have been received, was 1,165.35 miles. The figures given for the C.P.R. western lines include only such mileage as had been handed over to the operating department during the year, and do not include any lines upon which rails may have been laid, but upon which the ballasting and other work had not been completed. The C.P.R. subsidiary line, the Minneapolis, St. Paul and Sault Ste. Marie Ry., laid 123.80 miles of track in the U.S. during the year, and the Great Northern Ry., U.S., through its subsidiary company, laid 27 miles, from Molson to Oroville, Wash., in connection with the Vancouver, Victoria and Eastern Ry.

	Miles.	Miles.
ATLANTIC, QUEBEC AND WESTERN RY.		
Paspebiac to Port Daniel Centre		20.00
CANADIAN NORTHERN RY.		
Extension Emerson branch to Vassar, Man	47.35	
Winnipeg to Oak Point Jct	7.02	
Oakland to Totogan, Man	17.11	
Cardinal spur	1.25	
From Etoimami, Sask., north	50.00	
Spur, main line to Battleford, Sask.	7.46	
End of track to Stoney Plains, Alta.	17.13	
Edmonton to Morinville, Alta	21.30	
		168.67
CANADIAN NORTHERN ONTARIO RY.		
Vandorf to Don, Ont	27.00	
Mileage 74.5 to Washago, Ont	13.50	
Mileage 106.5 to Washago, Ont	18.50	
Portage Lake to mileage 21, Ont.	16.00	
Romford (C.P.R. crossing) to mileage 118, north of Parry Sound, Ont	10.00	
		85.00
CANADIAN PACIFIC RY.		
Highlands to Canada Sugar Refinery, Que	6.00	
Stanerville to Brunet's Quarry, Que.	4.00	
Nipissing Jct. to Temagami Co.'s Mills, Ont	3.00	
Guelph to Blyth, Ont. (Guelph & Goderich Ry.)	63.50	
Bolton to Bala, Ont	93.00	
Romford to French River, Ont	38.00	
Winnipeg Beach to Gimli, Man	9.00	
Wolseley-Reston branch, mileage 60 to 122	62.00	
Teulon to Komamo, Man	9.50	
Strasburg North, mileage 202 to mile-219	17.00	
Pheasant Hills Branch, mileage 345 to 360	15.00	
Moose Jaw to Tuxford, Sask	15.30	
MacLeod, Alta., into town	2.50	
Daysland to Hardesty, Alta	47.50	
Yahk to Kingsgate, Alta	9.20	
		394.50
CENTRAL ONTARIO RY.—Bancroft to Bird's Creek, Ont		5.00
GREAT NORTHERN RY. (U.S.) LINES IN CANADA—Brandon, Saskatchewan and Hudson Bay Ry., International Boundary to Brandon, Man.	69.45	
Midland Ry. of Manitoba, International Boundary to Portage la Prairie, Man	77.01	
Vancouver, Victoria and Eastern Ry. and Navigation Co., International Boundary at Midway, B.C., to International Boundary near Molson, B.C.	28.89	
		175.35
HALIFAX AND SOUTHWESTERN RY.—Bridgewater to Jordan River, N.S.	42.42	
Jordan River to Barrington, N.S.	44.76	
		87.18
INTERCOLONIAL RY.—From North Sydney to Sydney Mines, N.S.		2.70
INTERNATIONAL RY. OF NEW BRUNSWICK—Mileage 22 to mileage 33		11.00
KLONDIKE MINES RY.—Dawson to Sulphur Springs, Yukon		32.00
NAPIERVILLE JUNCTION RY.—International Boundary at Lacolle to St. Constant, Que		27.00
NICOLA, KAMLOOPS AND SIMILKAMEEN RY.—Spence's Bridge to Nicola, B.C.		47.00
ORFORD MOUNTAIN RY.—Potton Springs to Maisonville, Que		7.00
PRINCETON BRANCH, WASHINGTON COUNTY RY.—Increase of mileage by diversion of line between Baning and Princeto		0.35
QUEBEC AND LAKE ST. JOHN RY.—La Tuque branch	16.75	
Roberval Wharf branch	1.00	
Gosford branch	1.50	
		19.25
QUEBEC CENTRAL RY.—Beauceville to St. George, Que		9.00
ST. MAURICE VALLEY RY.—Three Rivers to Shawinigan Falls, Que.		20.85
RED DEER LUMBER CO.—Elk Gate Jct. to Barrows, Sask		5.00
TEMISKAMING AND NORTHERN ONTARIO RY.—Boston to McDougall's Chute, Ont		45.00
YORK AND CARLETON RY.—Stanley to Glippen Glen, N.B.		3.50
		1,165.35

AFFILIATED LINES IN UNITED STATES

	Miles.	Miles.
MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—From Brumbaugh to Armourdale, N.D.	10.38	
From Flaxton to Ambrose, N.D.	50.92	
From Garrison to Max, N.D.	13.70	
From Max to Ryder, N.D.	30.00	
From Drake to Dogden, N.D.	18.80	
		123.80
WASHINGTON AND GREAT NORTHERN RY.—From Molson to Oroville, Wash		27.00

During 1906, the second track mileage of Canadian steam railways was increased by 141,342 miles, distributed as follows:

CANADIAN PACIFIC RY.—West Fort to Neebing, Ont	4.9	
From Neebing to Murillo, Ont.	5.8	
From Dexter to Linko, Ont.	5.6	
From Murillo to Kakabeka, Ont.	4.9	
From Ignace to Gull River, Ont.	7.4	
Between St. Annes and Vaudreuil, Que.	3.4	
		32.0
INTERCOLONIAL RY.—From Halifax to Windsor Jct.	13.898	
From Halifax to Richmond, N.S.	0.881	
From Richmond to Windsor Jct.	13.017	
From Stellarton to New Glasgow, N.S.	2.095	
		15.112
MICHIGAN CENTRAL RD.—From Springfield to Hagarsville, Ont.	46.46	
From Tilbury to Ridgetown, Ont.	30.48	
From Welland to Bridgeburg, Ont.	17.29	
		94.23

A meeting was held at Halifax, N.S., Dec. 12, for the purpose of considering a proposal to establish car works in that city. It is proposed to raise a capital of $250,000 in $100 shares, and to ask the city to guarantee the bonds of a company to the extent of $125,000. A considerable amount of stock was subscribed at the meeting. The City Council at a meeting held at a later date decided to guarantee the bonds as asked.

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TORONTO, CANADA. JAN., 1907.

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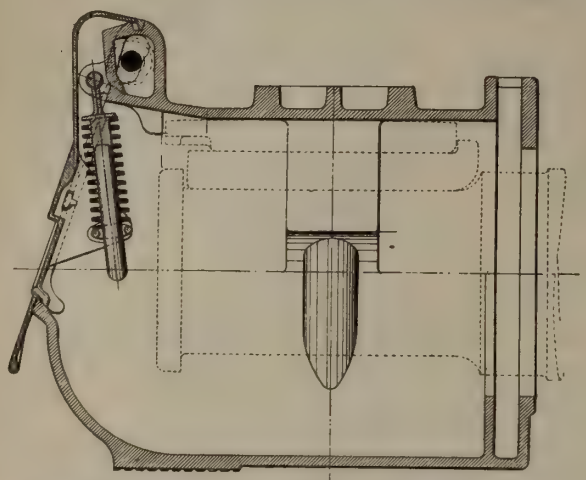

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The Passenger Department of Canadian Steam Railways.

By G. T. Bell, General Passenger Agent, Grand Trunk Railway.

In the beginning the passenger department had little or no individuality. It was merely an attachment to the general manager's, general superintendent's, auditor's, or some other office. This was natural when the railways were small, and all that seemed necessary was to issue a tariff of fares to several local stations and place it and some card tickets in the hands of a few agents and conductors. As the traffic developed, however, and the railways commenced to spread over the entire country and enter into friendly alliances with connecting lines in the U.S. and Mexico, the largest stations required ticket agents thoroughly qualified to advise as to the most inexpensive and comfortable, or luxurious and generally attractive routes available to reach everywhere in his own and adjacent countries, and even across the oceans to Europe, Asia, Africa, and the Islands of the Seas. Passenger agents became necessary at principal stations to aid in the reception at one train and transfer to another of ladies travelling alone, the young, the aged and the inexperienced. The way-freight and mixed trains that sufficed to move together the passengers and their goods were gradually replaced by exclusively passenger trains, and these rapidly supplemented by limited trains making stops at principal stations only, and restricted in the number and class of cars hauled, as required by the speedy schedules. Elaborate ticket offices were soon provided in the heart of the chief cities, and in many cases in smaller places, at which reservations may be made in advance of sleeping and parlor car, steamer, and other accommodations; trips are suggested and their time and cost considered, and full information imparted, all designed to make travel pleasant and encourage everyone to benefit by the educational and other advantages which it affords. An army of travelling passenger agents are employed to solicit the patronage of the public at home and abroad; those who hesitate are assisted to make up their minds, parties are organized and accompanied, tons of literature distributed gratuitously, telling of the country traversed by or tributary to the railway, and passenger traffic is promoted by every legitimate and ingenious effort. For more effective work, district or division passenger representatives were appointed, who could more closely study and keep in touch with conditions within their territory. The representatives are kept in harmony with the railways' general policy by continuous consultation with the general passenger agents, and the growth of many railways into large systems has necessitated several general passenger agents for one system, who report to a passenger traffic manager, the latter being in command of the passenger department and responsible to the president, or sometimes to a vice-president, who directs both freight and passenger departments.

I have briefly traced the organization of the passenger department as it to-day exists, and it may be of interest to say something of the nature of the duties performed by the staff at headquarters. The main divisions of this staff are: 1. Tariffs and tickets. 2. Excursions. 3. Advertising. 4. Immigration and colonization. 5. Statistics. 6. Accounts. 7. Refunds.

I presume the majority of persons have no idea of the labor and expense necessary to provide ticket agents with the fares, tickets, and instructions in relation thereto required to expeditiously and correctly sell tickets of many different classes to practically all places of importance the American Continent over, in round numbers, 250,000 miles of steam railway tracks, and, in addition, over numerous lake, river, and ocean navigation lines. Local tariffs on the principal railways with large mileage are issued in divisions, the fares from each station on the division to every other station on the same division being carefully shown, calculated on the mileage at the legal or maximum rate per mile authorized by the railway company's charter or approved by the Railway Commission. Competitive fares of other lines must be watched and met where it can be done judiciously without lowering the local fares to an unprofitable extent. If there are 100 stations on a division the total separate fares to be calculated and printed in the local tariff of that division would be 10,000. To facilitate the issue of tickets from a station on one division to any other station on the same railway, each agent is provided with an inter-division tariff, which contains fares from junction stations on each division to all stations on the railway which, by one addition of the fare to and from the junction, readily gives any local fare required. The division tariffs are prepared with the view of embracing in the same tariff all stations between which the volume of traffic is large or naturally flows, and to reduce to a minimum the necessity of adding fares to and from junction stations. Conductors are provided with tariffs of fares of a size and character suitable to their various runs. To stations on connecting lines the practice is, as far as practicable, to select a compiler of common tariffs in behalf of a group of lines more or less interwoven as connections or competitors, or both, in a certain section, or from important cities like Montreal, Toronto, Winnipeg, etc., to stations on other groups of lines, or in many cases to principal stations on all connecting lines, the fares being arranged by classes, and to every state, province, etc., in alphabetical order. This work of compiling and printing interline tariffs is aided greatly by the lines in various sections acting together in publishing their fares from basing or constructive stations through territorial traffic organizations. Each railway requires an elaborate chart of forms of interline tickets for guidance of ticket agents, detailing the lines and innumerable combinations of lines forming through routes to all parts of the country. Principal ticket offices have a complete supply of interline tickets applicable from their stations; other offices have a supply of only such forms of interline tickets as are likely to be frequently requested, and if asked for other forms use an exchange order, which designates the route, number, and class of the required interline ticket, which is furnished to passenger at the nearest convenient exchange office, a list of all such offices being in possession of each ticket agent. The use of the exchange order enables agents at small stations to give the public the benefit of through fares, as well as get their baggage checked through to destination. The charts and tariffs, especially those to stations on connecting lines, are subject to many changes, owing to new lines being opened, old lines extended, and consolidations between existing lines, requiring new tickets, withdrawal or alteration of old tickets, fares to new stations, changes and fares to old stations, etc. Some idea of the expense of printing tariffs and tickets may be gained by the fact that a railway company operating between New York and Chicago recently had occasion to reprint its local passenger tariffs, the total cost being approximately $15,000, and that one railway of 3,200 miles of track, handling about ten million passengers each year, pays for printing its tickets about $20,000 per annum.

In addition to the tariffs already alluded to, which apply to what may be termed ordinary passenger traffic, or, in other words, fares which are in force daily throughout the year, for one way tickets for single passengers, a great many special tariffs are required to provide for reduced fares below the maximum basis, given by the railway companies with the object of creating travel that otherwise would not move at all or in much smaller volume. The following will serve as examples of such special tariffs: 1. Round trip tickets on sale daily at 16⅔% less than double the one way fare, valid for one month. 2. Round trip tickets on certificates for persons attending meetings of regularly organized societies. These reduced fares vary according to total attendance from about the one way fare to one and one-third fare for the return journey. The railways in Ontario and Quebec grant reduced fares for 200 or 300 of such meetings each year. 3. One thousand mile tickets, the general rate being $25, which is 2½c. per mile. 4. Organized parties of 10 or more at one and one-third fare for round trip, or two-thirds fare when circuit (going one way and returning another), is being made. 5. Members of commercial travellers' associations who travel constantly for at least three months each year, 2¼c. per mile for one way tickets, and week-end round trip tickets at one way fare. About 20,000 members of five Canadian commercial travellers' associations benefit by this reduction. 6. Cricket, lacrosse, baseball, hockey, curling, and other organized clubs, in addition to reduction already stated for organized parties of 10 or more, are accorded 10 to 18 round trip tickets, for actual players, at one way fare. This is to encourage such clubs to make long trips, which many amateur clubs, comprised largely of young men of limited means, otherwise would hesitate to take. 7. Charitable homes for deaf and dumb, blind, etc., 2c. per mile. 8. Theatrical and concert troupes, bands, orchestras, lecture, and other organized parties of ten or more persons professionally engaged in giving public entertainments, 2c. per mile. 9. Guaranteed parties of 100 or more under auspices of organized associations, clubs, societies, churches, Sunday schools, mercantile firms, etc., at fares netting from 2c. per mile for short distances down to about ½c. per mile for longer distances. The associations, etc., are permitted to sell tickets at certain higher fixed rates, averaging about 20%, which is paid to them to cover the necessary advertising expenses, etc., and to aid their benevolent and other funds, which is a valuable incentive and materially promotes the success of such excursions. The rates are generally higher where these excursions are run in the winter, when operating expenses are greater and the number inclined to travel smaller; also if run to commercial centres at any season, as they naturally discount the regular business travel to such centres. 10. Military bodies of 100 or more, in uniform, ¾c. per mile. Such organizations usually stimulate general excursion travel to the place they visit. 11. Celebrations, demonstrations, regattas, political meetings, etc., round trip at one way fare; but as experience has shown few extra passengers are attracted to ordinary events of this character; where the one way fare exceeds $2.50 reduced fares are restricted to that limit. 12. Civic holidays, at one way fare for round trip from the stations celebrating the holiday. 13. Agricultural exhibitions, generally, round trip at one way fare, and, in addition, on certain days to large exhibitions in incorporated cities, offering exceptional prizes, attractions, etc., about two-thirds one way fare for round trip. 14. Sportsmen in parties of five or more on shooting and fishing ex-

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peditions to restricted territory, one and one-third fare. Such trips are generally longer and more expensive than the average of other special parties, and it is more difficult, therefore, to organize parties of ten or more. 15. School and college vacations at Christmas and Easter of non-resident pupils and teachers returning to their homes, round trip tickets at one and a third fare. 16. Public holidays, such as Christmas and New Year's, Good Friday, Victoria Day, Dominion Day, Labor Day, and Thanksgiving Day, round trip tickets at one way fare, with several days' time limit, and at one and one-third fare with longer limits. 17. Commutation fares between cities and suburban stations where a large number of persons reside who travel daily to and from their place of business, from about six-tenths of a cent to 1½c. per mile, according to distance and restricted privileges of tickets—the lowest rate applying to such tickets as are valid for one person only who must average one round trip daily. The minimum for a single trip is 5c.

Excursions local to a district are generally arranged by the district or division passenger agent, who deals direct with the public, takes guarantee, orders tickets, notifies the transportation department of the train and probable coach requirements, instructs agents as to sale of tickets, and advises the general passenger department of the completed arrangement, which, in turn, is transmitted to the auditor of receipts, who checks agents' ticket reports, prepares and furnishes to the general passenger department statement of sales and rebates due to promoters, voucher for which is then made and passed to the treasurer, who remits or instructs agent to pay the amount. If the excursions pass over connecting lines the negotiations with and advices to and acknowledgments from such lines are handled by the general passenger departments of the various lines concerned. The utmost care is necessary to see that every detail is understood in advance by each person responsible for any part of the excursion, as a slip anywhere might cause serious inconvenience and discomfort to a large number of persons. It is the exacting, unimaginative side of the passenger department, for mathematical accuracy must govern every move, yet the great variety of organizations and greater variety of promoters and patrons—comprising all classes of the social structure—afford some relief from the otherwise continuous strain of the excursion work, more especially during the summer months. On the intelligent, energetic, careful efforts of the excursion staff much depends in the way of developing traffic, by directing attention to new resorts which the public are constantly seeking and by co-operating with the transportation department in handling successfully each party, thus causing them to desire to repeat the pleasing experience.

A few weeks ago J. J Byrne, the head of the passenger department in California of one of the greatest U.S. railways—himself a former Canadian railway employe—in addressing the general passenger agents of America, used these words: "Unrest is the seed of passenger traffic, and you are the sower. If you have an inland town, give the people a chance to get to the ocean or to the lake; if you have a flat country, give them a chance to go to the hills or mountains; if you have a hill country, coax them out to the fertile plains. . . . . Show the city man the country, and paint its green hills and babbling brooks till he can't resist. Lecture the farmers on the lure of the city, its glittering lights and gilded palaces of amusement. Preach the belief that travel is the great educator; make parents feel that the children should be educated away from home, and make the children long for the delights of home. Hang fine pictures of distant scenes in the school room; thus the teacher will be constrained to go, that he may explain it to his pupils. By travel the minister can find themes for his sermons, and the lawyer find modern instances. Picture to the sturdy the charm of the place at the other end of your road for golf, or boating, or bathing; to the hunter tell of the game just $10 distant from where he is. East of the Rockies no fish are caught equal to those near Catalina or in the Columbia; on the Pacific Coast the best fish are in the Atlantic or Gulf. Distance, not time, is the great healer of sorrow, and change is as good as a rest."

(To be continued in next issue.)

ELECTRIC RAILWAYS.

Electric Railway Shop Practice.

By W. R. McRae, Master Mechanic, Toronto Railway.

Probably there is no department of electric transportation which has so completely changed its methods as the repair shops of a modern electric railway. A glance into the procedure and equipment of a modern electric railway shop by one who has worked in the old days of risk and chance, but who is not now engaged in electric railway work, will cause the "has been" to figuratively scratch his head, and recall memories of the old days when he was up against it. He would very likely tell you how he used to remove the armatures from the motors by using a tripod and rope block, or took them out from below with the aid of a screw jack and two inch plank. He would also probably tell you how he was accustomed to file his commutators perfectly round by hand. He could if he wished describe many other things which he used to do, which to the shop man of the present day would appear ridiculous. The writer knows from his early experience, that these methods were in the early days of electric transportation necessary; in fact, the handy man was practically indispensable; as his duties would not only require him to do electrical repairs, both to cars and power station, line and track work, and not unusually run a car, but he was very often obliged to attend to the boilers, and also look after the engine in the event of the illness of the regular engineer. Circumstances are now altered, and the fact that electric transportation is no longer an experiment, but an important factor in the business of the world, has enabled us to secure more modern methods in repair work. As a matter of fact, the necessity of having modern and reliable equipment in our rolling stock is fully recognized by the managers of all enterprising roads. To properly maintain equipment such as that mentioned above, it is absolutely necessary to have the repair department equipped with the very best of machinery and tools. It is also essential that the shops should be laid out in a proper manner. Other important points are the securing of proper repair material, and the employment of the right kind of men to do repairs. In the matter of shop construction, the building of proper pits is of great importance, as lack of pit room in shops is a great drawback. I would strongly recommend that all barns, storage houses, and repair shops, be designed for all tracks to be laid over pits, as this not only facilitates repair work, but also motor and truck inspection. It is also well to have a number of pits designed for the removal of wheels. The installation of hydraulic pit pumps, air hoists and swinging cranes, is also strongly recommended. The use of compressed air is now largely practised in modern railway shops for the purpose of operating pneumatic tools, the cleaning out of motor cases, and the operating of vapor painting. Patterns, jigs and templets for the manufacture of all standard repair parts, should be procured, and kept in the tool room of the various departments engaged in the manufacture of the different parts. The subject of standard equipment is a question which I consider to be one of great importance, and repair men will heartily welcome the day when it will be necessary to keep only one type of repair parts for all equipment. For some years electrical and mechanical officers of the different roads have been endeavoring to reach some uniform system of repairs and repair parts, and I have pleasure in stating that their efforts have to a certain extent been rewarded. This success is largely, if not entirely, due to the formation of associations which meet at stated intervals, for the discussion of methods of maintenance, as well as by the question box system, and of course by correspondence. This system of exchanging ideas has entirely eliminated the feeling which repair men had some years ago, namely, to say nothing, and let the other fellow find out by experience. We of the Toronto Railway are very proud of our shops and, without boasting, may say that we have cause to be, as taking into consideration the size of our system, and the number of cars operated, we have shops that are as up-to-date as any in existence to-day. We have endeavored to keep our shops in such a condition as to be able to meet any demands which may be made upon them at any future period; of course, within a reasonable time. On the question of general shop practice, the field for discussion is so large that it is only possible for me at this time to touch on a very few of the methods in vogue in our shops.

First, I will mention the machine shops. This department is equipped with the most modern machinery that can be obtained. Templets and jigs have been manufactured in our own shops for the purpose of turning out work with speed and accuracy. In this department, as well as in other departments, the apprenticeship system is in vogue, and we have been able by means of fair treatment to retain the services of our graduated apprentices. These men are so perfectly familiar with the articles with which they are called upon to work, that they are able to turn them out much more quickly than would be the case were we to engage men from the outside and break them in. A sufficient number of skilled mechanics from outside sources are engaged to enable us to handle any and all kinds of machine work which may be required to be manufactured in our machine shops. One of the very important articles which is turned out from this department is the motor brush-holder. I may say here that all brush-holders go through this department before being used on motors, whether they be new or repaired. The proper commutation of current to the armature is one of the very important factors in connection with the securing of efficiency in the motor equipment. By this I mean the proper spacing of brushes, and the angle at which they are set on the commutator. We in Toronto have had a great deal of trouble with our motors, arising from the improper setting of the brushes, and caused by the wooden brush-holder yokes shrinking, and also the brush-holders being set at the wrong angle to properly follow the natural wear of the commutator. To overcome this difficulty, I have had constructed a jig, on which all complete brush-holders and yokes are adjusted before being issued to the motor supply department. This jig consists of a metal bed plate to which is bolted a cylinder, the same size in diameter as an average commutator. In the centre of

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this cylinder is a post about four inches in diameter; the cylinder is slotted to receive a steel insert the same size as a carbon brush; the post is also slotted for the steel insert to enter into, and an adjustable bracket is also bolted to the bed-plate to permit the regulating of the distance between centres of the different types of motors. The completed brush-holder is then bolted to this bracket, and if correct, the steel inserts will easily pass through carbon holder, cylinder, and pocket home in slots in the centre post of the jig. By this means proper distances and angle are secured. We use for our brush-holder yokes the best of kiln-dried hard maple, which is kept in storage two years before using. This practically overcomes the trouble caused by shrinkage. A special jig is also used which permits of drilling brake hangers for seven different types of trucks. All hangers of similar lengths are absolutely the same centres. This is very important, as it ensures the correct hang, and longer life to the brakes shoes. It also assists in overcoming the chattering of hangers when the brakes are applied.

In the matter of motor maintenance, we in Toronto have made a special study of the causes which lead to motor breakdowns, and, on their location, have gone systematically to work to overcome and find a remedy for them. I am pleased to state that the officials of the manufacturing companies have worked heartily and harmoniously with us in this matter. The setting of a standard for brush-holder spring tension is also important to ensure the best results from commutator wear.

Too much attention cannot be given to the subject of motor bearings. The best of metal obtainable is none too good for this purpose, as probably no piece of machinery is subject to so much abuse as railway motors, and especially is this true of the bearings. As regards lubrication, oil is rapidly taking the place of grease; in fact, it may be safely said that the days of grease lubrication are practically past. All modern motors are designed for oil feed bearings, and several good oil cups have been placed on the market for the older types of motors. I strongly advise electric railway men to look well into the matter of the lubrication of equipment, as neglect in this respect leads most directly to the coal pile and increased operating expenses. I sum up the motor situation thus: Be sure of the condition of armature and field windings, have proper air gaps between magnets and armature, brush-holders correctly set to follow the wear of the commutator, keep bearings well lubricated, motors clean, and there is no reason on earth why a motor should be pulled apart more than once in eight months for overhauling, except for some such cause as lightning, or mechanical injury. Regarding practice in armature and field department, space will not permit of my going into details, suffice to say that I consider this department the most important in connection with the repair shops. In the matter of up-to-date appliances we have treated it accordingly, and results have proved the wisdom of this liberal treatment. In our shops we are able to trace back to the man who made or repaired any article in the works which does not turn out satisfactory. This system has given most beneficial results. Touching on the matter of car records, I cannot too strongly impress upon you the necessity of keeping a separate record of the performance of every car upon your road. Quite often it is found that instead of your cripples being different cars, you will find by individual records that it is the same cars which are continually running in for repairs. Thus you are given an answer to the question, Which car shall be overhauled next?

I would suggest the following matters for discussion: The advisability of placing automoteneers or devices on controllers to regulate operation by motormen. Oil cups and methods of lubricating motors and journal bearings. The vacuum method of cleaning car upholstering.

Electric Railway Track Laid in 1906.

In December as usual we sent circulars to all the electric railway companies in Canada asking particulars of new track laid in 1906. Many of these companies, we regret to say, have not been as prompt in sending in their replies as the steam railway companies, so the particulars given below are not complete. The returns received show only 60 miles of new track, nearly all in Ontario. The largest extension has been on the Toronto and York Radial Ry., from Newmarket to Jackson's Point, 24.40 miles. The Hamilton Radial Electric Ry. reports that no additional mileage was laid, but the seven miles between the Hamilton city limits and the canal at Burlington beach, was relaid, and a second track laid.

Following are the returns of the new track laid as officially reported to date:

	Miles.	Miles.
LONDON STREET RY.—Extensions within London, Ont.		1.9
MONTREAL PARK AND ISLAND RY.—From main line to rail track.		0.59
MONTREAL STREET RY.—Various extensions on city streets.		2.31
TORONTO AND YORK RADIAL RY.—		
Metropolitan Division, Newmarket to Jackson's Point, Ont.	24.40	
Scarborough Division, Halfway House to Highland Creek, Ont.	4.30	
Mimico Division, Long Branch to Port Credit, Ont.	4.00	
		32.70
TORONTO RY.—Various extensions, length in single track.		9.82
SOUTH-WESTERN TRACTION CO.—		
Lynhurst to St. Thomas, Ont.	1.00	
St. Thomas towards Lake Erie.	8.00	
		9.00
		56.32

It was stated in the British House of Commons, Dec. 3, that an inquiry will be held as to the grounding of the battleship Dominion in the St. Lawrence, as soon as she returns to England. The vessel was damaged for a length of 280 ft. by the grounding.

A Charlottetown, P.E.I., despatch says that a company has been organized to procure a powerful winter steam car ferry, and will apply to the Dominion Government for a subsidy to carry on the winter service between Prince Edward Island and the mainland.

Capt. Newcombe of the Government steamer Kestrel, employed on the Pacific coast, who was suspended on account of alleged irregularities in connection with the purchase of supplies, has been reinstated. An investigation was held, and his conduct vindicated.

The standard freight mileage tariff no. 1, and the standard passenger tariff no. 1, of the Klondike Mines Ry., which have been approved by the Board of Railway Commissioners, are signed by H. B. Smith, C.E. M. Inst., General Manager, and H. D. Weeks, General Freight and Passenger Agent.

According to the decision of L. Tuttle, President, Boston and Maine Rd., to whom the matter was referred, the Michigan Central Rd. has been placed in a differential class by itself, as a result of the recent rate controversy. By the terms of the decision, the M.C.R. is permitted to charge a rate to Boston, New York and Buffalo, which is between the standard and the regular published differential rates. An exception is made in the case of the standard first-class rate to Boston. The arbitrator decides that the rates which he has given the M.C.R. shall be applied by that road only over its eastern connection—the New York Central Rd.

Canadian Street Railway Association.

The semi-annual meeting was held at Toronto, Dec. 7 and 8, W. H. Moore, President, in the chair; the following companies being represented: Hamilton Cataract Power, Light and Traction Co.; International Ry.; Montreal St. Ry.; Niagara, St. Catharines and Toronto Ry.; Ottawa Electric Ry.; Sandwich, Windsor and Amherstburg Ry.; Toronto and York Radial Ry.; Toronto Ry.; Toronto Suburban Ry. There were also present, J. C. Rothery, General Manager East Liverpool, Ohio, Traction and Light Co., and Acton Burrows, Managing Director RAILWAY AND MARINE WORLD.

The report of the Executive Committee referred, among other things, to the appointment of the Ontario Railway and Municipal Board and to a number of electric railway cases which had been dealt with by the Board. In the case of the Hamilton St. Ry. the city council complained to the Board that the company was not performing its obligations as provided by the agreement, that the road was in a state of disrepair and the rolling stock completely run down. The Board appointed an engineer to inspect the railway, who recommended certain work to be done. The Board forwarded these directions to the company, which did not carry them out. As a result of the company's opposition to the engineer's recommendations, the Board granted a hearing to the parties, at which the city sought to prove the absolute disrepair of the street railway system. The company put in evidence to refute these statements and urged that the Board should take into consideration the financial condition of the company, and of its earnings and operating expenses, and that the condition of the road should not be made too burdensome where no profit resulted from its operation. The city urged that the terms of its agreement with the company should be fully carried out by the company, no matter what loss might be sustained. The Board concluded that they could not ignore the company's financial situation and must take into consideration the revenue and operating expenses, so that in arriving at a conclusion as to how far the Board should go in enforcing the terms of the agreement, they would interpret agreements as lightly as possible, as against companies whose returns were low; but as against companies whose returns were high and in a good position financially, agreements would be interpreted in the strictest sense. This announcement by the Board is very important and affects all companies operating in Ontario. The Executive Committee, considering the importance of this subject, directed the Secretary to attend the sessions of the Board during this case in the interests of the Association. A report of the proceedings will be furnished to the members as soon as they are completed by the reporter.

The City of London made a similar complaint about the London St. Ry. Co. The Board made an inspection of the company's system, heard both sides and sent an engineer to report upon conditions, and to recommend such improvements and repairs as would put the system in a fair state. The engineer's report has been made and has been accepted by the company, so that this difficulty has passed off without much friction. Similar inspections are to be made of other systems, as it is intimated that the Board proposes to familiarize themselves with every system under their jurisdiction.

W. R. McRae, Master Mechanic, Toronto Ry., read a paper on "Some of the methods in vogue in modern street railway shops." Mr. Clark, Assistant Comptroller Toronto Ry., read an introductory paper on the history of electric traction in Ontario, and he and P. Dubee, Secretary Montreal St. Ry.,

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GEO. S. MAY, M.P.P. OTTAWA
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were appointed a committee to compile a similar history for the whole Dominion. J. C. Rothery read a paper on the power-house, and W. H. Fiske, electrician, Toronto Ry., read one on storage batteries. A. M. Grantham, C.E., Purchasing Agent and Superintendent of Construction, Toronto Ry., contributed an exhaustive paper on track construction. All the papers were very fully discussed and a lot of valuable information was elicited.

On the evening of Dec. 7, the representatives attending the meeting were entertained at dinner by the Toronto Ry. Co. The arrangements, which were made by A. M. Grantham, were most complete, every detail, from the artistic menus to the musical and other entertainment features, being most perfectly carried out.

Projects, Construction and Betterments.

Brantford and Hamilton Ry.—J. G. Gauld is reported as having stated that the cars would be running on the line between Hamilton and Brantford, Ont., by July 1. The grading is completed from just outside Hamilton to Cainsville, about six miles from Brantford. This portion of the right of way, as well as the crossing of the rifle ranges and the golf club at the Hamilton end, will be completed during the winter. Ties and rails are expected to be laid during the winter ready for setting and ballasting in the spring. (Dec., 1906, pg. 753.)

Fort William, Ont.—Application will be made next session of the Ontario Legislature for an act sanctioning a by-law to construct an electric street railway and to provide for the raising of $82,000 by way of debentures necessary therefor.

The Guelph Radial Ry. Co. has under survey or contemplation a line from Guelph to Hespeler, Ont., and a line from Guelph to Puslinch Lake, Ont., about 10½ miles.

Hamilton, Waterloo and Guelph Ry.—The Minister of Railways has approved of the application of the company for permission to construct its line across Dundurn Park, subject to the City Council passing a by-law giving its consent. (Dec., 1906, pg. 753.)

Huron and Ontario Ry.—A meeting was held at Owen Sound, Ont., Nov. 28, when S. F. Kilgore, Toronto, President of the company, explained that the proposal was to construct an electric railway from Whitby to Toronto, thence to Owen Sound by way of Tottenham, Flesherton and Thornbury and Meaford. Surveys for these lines had been completed within the previous week. It was also proposed to construct a line from Owen Sound to Southampton, and southerly along the Lake Huron shore to Goderich, with a line running east to Kincardine and Hopeville; and continuing south from Goderich to Parkhill, Sarnia and Windsor. The distance from Owen Sound to Toronto would be 152 miles, and would be covered in from 3½ to 4 hours. The surveys showed that the gradients would not exceed 1% with a curvature of not more than 6°. The line would be operated by electric locomotives. The Canadian Northern Ry. was not behind the project, but he would not say who were. The company's bonds to the extent of $11,000,000 had been placed on the London, Eng., market. The meeting was not a unanimous one, but a resolution was ultimately passed favoring the calling of another public meeting for the consideration and discussion of any agreement which company might submit to the Town Council, and any by-law which the council wished to adopt in connection therewith.

Application is being made at the current session of the Dominion Parliament for an act authorizing the construction of branch lines from between Shelburne and Tottenham, westerly through the counties of Simcoe, Dufferin, Peel, Wellington, Waterloo, Perth, Huron, Middlesex, Lambton, Kent and Essex, to London, Strathroy, Parkhill, Wallaceburg, Sarnia and Windsor, Ont.; from near Shelburne, through the counties of Dufferin, Grey and Simcoe, to Collingwood, Ont. An extension of time for the construction of the lines is also asked. In connection with this company's proposals, the application of the Owen Sound Bridge and Terminal Co. to the Dominion Parliament for an act of incorporation, referred to on pg. 5 of this issue, is of interest, as the notice of application is signed by T. H. Kilgore, who is Secretary of the H. and O. Ry. Co. (Dec., 1906, pg. 753.)

Levis County Ry.—The company has under consideration the construction of the following branch lines or extensions: St. Joseph to Gilinore's Hill, one mile; Levis uppertown loop line, 1⅝ miles; St. Romuald to German Bridge, Que., two miles.

London Street Ry.—The repairs and improvements at the bridges recommended to be made by the engineer who inspected the line for the Ontario Railway and Municipal Board were completed early in Dec. The other work called for is well forward, and will be completed as speedily as possible. (Dec., 1906, pg. 753.)

Manitoba Radial Ry.—A. Wagner, R. S. Fletcher, W. J. Donovan, J. A. Munro, C. Hoffman, Winnipeg, Man., are applying at the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway, or railways, to be operated by electricity or other power, from Winnipeg to Lake Manitoba, and other points; to construct branch lines, to develop electrical power and sell the same, and with all other incidental powers. (Dec., 1906, pg. 753.)

Montreal Street Ry.—W. G. Ross, Managing Director, is quoted as saying that the company has secured a right of way from Henderson's to a point opposite St. Vincent de Paul, about 4 miles; that work will be commenced upon a line there in the spring, and that it will be in operation by July 1, giving connection from Craig st. to the ferry, 10 miles away. It is also proposed to construct a branch from Peloquins to Bordeaux, 2½ miles; and surveys have been completed for the extension of the Lachine line from Stoney Point to Dorval, about five miles. Following the taking over of the lines of the Montreal Terminal Ry., Jan. 1, Mr. Ross said a number of improvements would be effected, which would give new routes and a better service. Surveys were also being made for an extension from St. Laurent on the Park and Island Ry., and curve around to St. Genevieve, about nine miles. (Dec., 1906, pg. 753.)

North Midland Ry.—The taxpayers of St Marv's, Ont., defeated the by-law to lend $40,000 to the company for 30 years, upon condition that the company's powerhouse and car shops would be located in the town. A recount has been demanded, and the promoters of the company hope to have an opportunity of having the by-law submitted a second time. (Dec., 1906, pg. 753.)

Quebec and Saguenay Ry.—Six miles of the line have been located from the terminal of the Quebec Ry., Light and Power Co.'s line easterly towards Cap Tourment. The line will be at a uniform level of about 3 ft. above high water mark. The survey work was being greatly delayed, at the time we were advised, by the high tides and gales which were prevalent. A contract had not been let at the end of Nov., but it was expected to let one early in Dec., and that J. D. Cameron, Quebec, would probably get it. (Dec., 1906, pg. 753.)

Quebec Ry., Light and Power Co.—The dam which the company is building at the Natural Steps of the Montmorency River has been completed below the water level, and as the water is at present low, good progress is being made with the work. Negotiations are reported to be in progress to secure a charter to extend the line into Quebec county, but the President states that he does not know of any plans being prepared or property purchased for the purpose of extending the line to Sillery, Que. (Nov., 1906, pg. 675.)

St. John and Grand Falls Electric Ry.—Application will be made next session of the New Brunswick Legislature for an act incorporating a company with this title, with power to construct an electric railway from St. John to Fredericton, thence to Woodstock and Andover, N.B.; thence crossing and recrossing the St John River, as it may deem expedient, to Grand Falls, N.B.; thence to the boundary of the State of Maine above the falls. The application is signed by J. Burgess, Grand Falls, N.B.; J. F. Tweedale, Arthurette, N.B.; and J. E. Stewart, Andover, N.B.

Seaforth to Brussels, Ont.—Local reports state that a proposal is under consideration to construct an electric railway from Seaforth to Brussels, Ont., and to connect it with the C.P.R. at Walton, Ont. The projected line would be about 20 miles long, and would run through a good farming country, and serve several small villages now without any rail connection with outside points.

Southwestern Traction Co.—The Canadian Electric Traction Co., which is the construction company for this electric railway, is completing the mile of grading between the present track end and Port Stanley, Ont., and will have it ready for operation early in the spring. It is also constructing a branch from Delaware to Lambeth, Ont., 6.75 miles (Dec., 1906, pg. 753.)

Windsor and Tecumseh Electric Ry.—The Detroit United Ry., which owns the W. and T.E. Ry., as well as the Sandwich, Windsor and Amherstburg Ry., is constructing eight miles of line from Walkerville to Tecumseh, Ont. (Dec., 1906, pg. 753.)

Windsor, Essex and Lake Shore Rapid Ry.—An order has been issued by the Board of Railway Commissioners authorizing this electric railway to carry its line across the Michigan Central Rd. at Talbot St., Essex, Ont., at rail level, instead of by a subway as formerly ordered. The regular safety devices are ordered to be maintained, and the cost of providing a watchman, day and night, is to be divided equally between the two companies. Track has been laid between Windsor and Kingsville, Ont., except about a mile, and the rails and ties are on the ground for an extension from Kingsville to Leamington. (Sept., 1906, pg. 549.)

Electric Ry. Finance, Meetings, Etc.

Berlin and Waterloo Street Ry.—At a recent session of the board of arbitration which is sitting to determine the value of the B. and W. S. Ry., which has a length of about two miles, and which the town of Berlin, Ont., wishes to purchase, the company placed a value of $182,877 upon the property. This is $68,000 in excess of the amount at which the value was placed by the company at the commencement of the arbitration proceedings.

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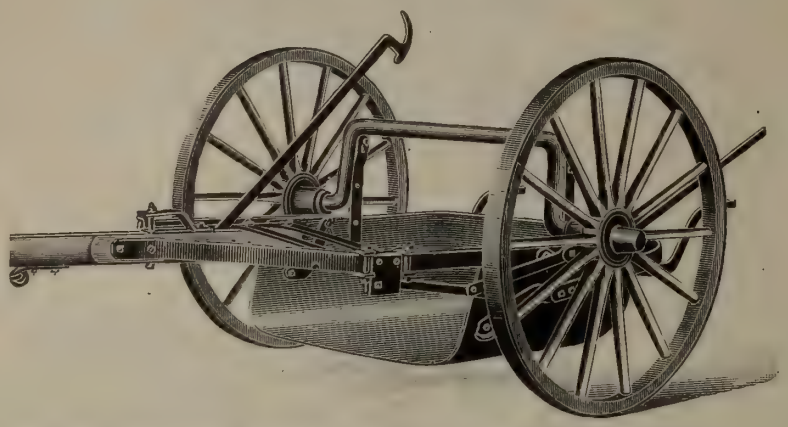

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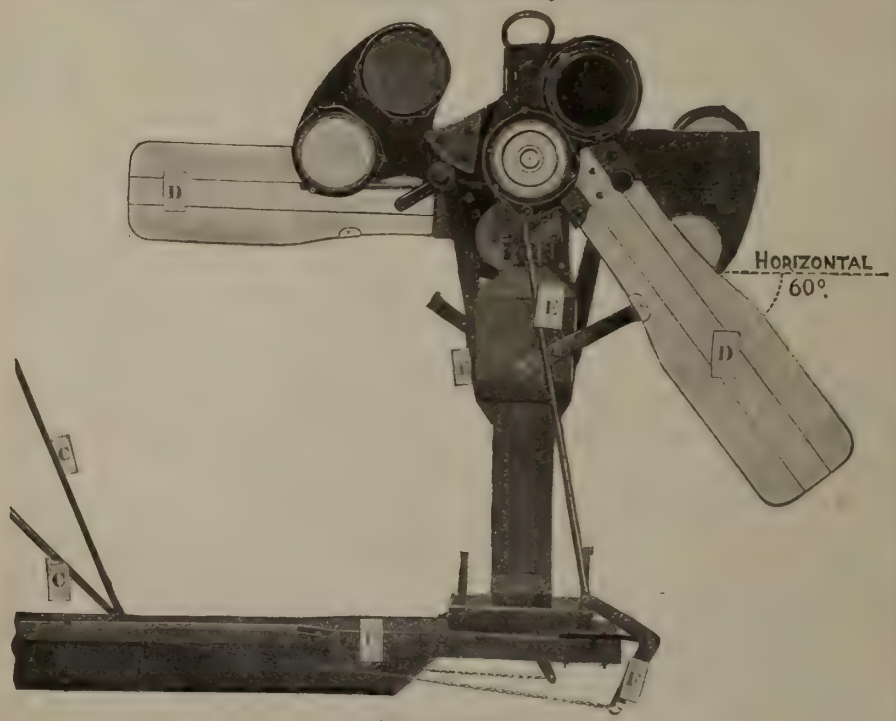

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Halifax Electric Tramway Co—Railway receipts for Nov., $11,849.34; total railway, electric lighting and gas receipts for Nov. $34,351.96, against $11,414.38 railway, and $33,039.31 total receipts for Nov., 1905.

Hamilton, Grimsby and Beamsville Electric Ry.—The adjourned annual meeting of the shareholders has again been postponed to a date in Jan.

Hamilton Street Ry.—The Hamilton, Ont., City Council has appointed Aldermen Stewart, Witton and Howard a committee to interview the Hamilton Cataract Power, Light and Traction Co., and ascertain, if possible, the price at which it will sell the system.

Montreal Street Ry.—Passenger earnings for Nov., $257,349.46; total earnings, $263,260.41; against $228,601.00 passenger, and $232,635.23 total for Nov., 1905. Operating expenses, $174,933.26; city percentage on earnings, $9,008.03; interest on bonds and loans, $17,074.61; contingent for renewals, $13,193.74, against $8,291.78 city percentage on earnings; and $13,782.37 interest on bonds and loans; there was no contingent fund for renewals in 1905. The surplus for Nov. was $49,050.77, against $56,933.45 for Nov., 1905. Net earnings for two months ended Nov. 31, $213,308.91; surplus, $134,022.63, against $187,115.05 net earnings and $143,978.26 surplus for same period, 1905.

Montreal Street Ry.—Application will be made next session of the Quebec Legislature for an act amending the company's charter, increasing the number of directors from five to nine, reducing the number of stockholders whose vote is required for the increase of the capital stock of the company from three-fourths to two-thirds, and for other purposes.

Niagara, St. Catharines and Toronto Ry.—Gross earnings for the year ending Oct. 31, $225,447.55, as against $210,484.79 for the corresponding period of 1905, showing an increase of $14,972.76.

Southwestern Traction Co.—Officials of the company in London, Ont., stated Dec. 5 that there was no foundation for the report that the lines, franchises, etc., were to be taken over by the Detroit United Ry. It was, however, contemplated to abandon the present three-phase alternating system of operating the line, and to replace it by the system in use on other Canadian lines.

Toronto Ry.—Car earnings for Nov., $247,314.35, against $220,803.78 for Nov., 1905

Windsor, Essex and Lake Shore Rapid Ry.—The U.S. interests in the line have been acquired by the existing Canadian interests, and the line will be financed in future as a Canadian enterprise. The Canadian directors who have taken this action are: W. E. McKeough, W. R. Phillimore, J. and W. Piggott, Chatham, Ont.; and W. C. Crawford, Tilbury, Ont. Jno. Piggott remains as President of the reorganized company; Jas. Brien, Essex, succeeds W. L. Wilson of Port Huron, Mich., as First Vice-President, and W. E. McKeough becomes Second Vice-President, in succession to Jas. Brien.

Electric Railway Notes.

The Port Arthur, Ont., Town Council has added several new cars to the rolling stock of its street railway.

Press reports states that I. K. Pierson, Chief Engineer of the Brantford and Hamilton Ry., has resigned and that W. Hillman has been appointed to succeed him.

We are advised that the press reports to the effect that the Hamilton Cataract Power, Light and Traction Co. had ordered 100 new cars for the Hamilton Street Ry., is incorrect.

The Winnipeg City Council has entered a suit against the Winnipeg Electric Street Ry. to have the right of the company to bring electrical power into the city from an outside source decided.

The Toronto Street Railway Men's Union has applied to the Ontario Railway and Municipal Board for an order to compel the Toronto Ry. to provide vestibules on the rear end of the cars, as required by the Railway Act of 1906.

The car barns of the Galt, Preston and Hespeler Electric Ry.. and the Preston and Berlin Ry., at Preston, Ont., were burned, and most of the cars belonging to the two lines destroyed, by a fire which broke out on Dec. 4 at 3 a.m.

An agreement has been reached between the Winnipeg Electric Street Ry. and the City Council, by which the city's action respecting the electrolysis of the water mains by power escaping from the company's system, will not come on for trial.

The Ontario Railway and Municipal Board tested a number of fenders for use on electric railways, with a view of approving of one or more for adoption on the electric railways of the province, Nov. 29 and 30, and will have further tests made

The Imperial Privy Council has given both the Toronto Ry. Co. and the Toronto City Council leave to appeal from the decision of the Supreme Court of Canada, in the consolidated suits brought by the city against the company for alleged breaches of the agreement.

The action which was taken by the Hull, Que., city authorities to have the question of the C.P.R.'s right to haul freight over the Hull Electric Ry., which it owns, tested, has been withdrawn, the company promising that the terms of the by-law would be strictly complied with in future.

The Toronto Ry. has issued an order stating that employes in uniform, whether off or on duty, going into a saloon will be instantly dismissed. Such a rule, the business agent of the Street Railway Employes' Union states, was adopted some years ago at the suggestion of the employes themselves.

L. Trudeau, Superintendent Montreal Street Ry., died at Maisonneuve, Que., Dec. 11, after a lengthened illness. He started as a conductor with the company in the old horse-car days, and was subsequently manager of the electric railways at Bordeaux, France, and Alexandria, Egypt, returning to the Montreal Street Ry. in 1904.

The Montreal Street Ry. has announced that a new schedule of wages would come into effect Jan. 1 as follows: conductors and motormen in first and second year of service, 18 cents an hour; after two years' service, 19 cents an hour; after five years' service, 20 cents an hour. This means an increase in the pay roll of about $75,000 a year.

The Toronto Ry. has appointed four Divisional Superintendents, who will have supervision over all car starters, motormen and conductors, at their respective barns. A. E. Edwards has been appointed at Dundas St. barns; J. M. McCullough to King St. barns; C. W. Steel to Roncesvalles Ave. barns, and J. J. McWilliams to Yorkville Ave. barns. These Divisional Superintendents will be under W. H. Nix, Chief Inspector.

Judgment has been reserved by the Supreme Court at Ottawa, in the two appeals by the Hamilton Street Ry. in the suits brought against it by the Hamilton City Council. One suit had reference to the method of calculating the percentage payable to the city and the other has to do with the issue of workmen's tickets. The city claims such tickets should be issued to all who ask for them, and the company desires to restrict the issue of tickets to bona-fide work people.

Jas. Leitch, K.C., Chairman of the Ontario Railway and Municipal Board, has issued a statement showing the powers which the board has to seize street railway lines. The act empowers the board to seize a railway in the event of the owners disregarding an order respecting equipment or service or breach of an agreement with a municipality. So far as the powers of the board in relation to strikes are concerned, if both parties agreed it could hear the matters in dispute and make an order that would be binding. If there was no such agreement, and the board was called upon to act by a municipality, or some interested party, it could endeavor to effect an amicable settlement, or investigate all the facts bearing upon the strike, and bring in such recommendations as in its judgment would contribute to a fair and equitable settlement. Either party can refuse to be bound by recommendations made under such circumstances.

Grain Elevator Notes.

The Royal Commission on the Grain Trade held a series of sittings at various points in Manitoba, Saskatchewan and Alberta during Dec.

The Farmers' Elevator Co. is putting its elevator at Virden, Man., which collapsed recently with 40,000 bush. of grain, into a thorough state of repair.

The British America Elevator Co. has been registered in Ontario under the act respecting extra-provincial companies, W. Gow, Toronto, being appointed its attorney.

The question of where the action of the Gaspesian against the Montreal Grain Elevating Co., for damages arising out of a collision, shall be tried, is before the Exchequer Court upon four appeals.

Jas. Clark, who died at Goderich, Ont., Nov. 29, was a director of the Goderich Elevator and Transit Co., and was also interested in the Lake Huron and Manitoba Milling Co., as well as in several fish and other companies.

The new elevator at Goderich, Ont., received its first cargo of grain Nov. 26. The elevator is of concrete, square bin construction, and is claimed to be fireproof in every particular. The operating machinery is driven by electric motors.

The Medicine Hat Milling Co. is applying to the city council for a loan of $7,000 for the purpose of erecting a large grain elevator at Medicine Hat, Sask. The company already possesses three grain storehouses at its mills, but increased accommodation is necessary to handle the growing business of the district.

The Royal Trust Co., Montreal, made a seizure of the Great Northern Ry. of Canada, Nov. 23, to satisfy a judgment in its action on behalf of the bondholders of the Great Northern Elevator Co., Quebec. An appeal against the decisions, under which the seizure was made, is expected to be taken to the Supreme Court.

The working house at the C.P.R. Elevator D., Fort William, Ont., was completely destroyed by fire on the morning of Dec. 7. The damage is estimated at $175,000. The elevator was built in 1898, and the working house was destroyed by fire in 1901. When the new working house was erected, the storage capacity was largely increased.

The Gilchrist Transportation Co., Cleveland, Ohio, has brought an action against the Zenith Grain Co., Winnipeg, Man., and the Canadian Northern Ry., to recover the value of 2,718 bush. of grain. The plaintiffs own

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the str. Oglebay, upon which there were loaded through the C.N. Ry. elevator a cargo of wheat which the defendants say was 146,147½ bush.; and the plaintiffs say was only 143,429½ bush.

The substructure of the new elevator at Port Colborne, Ont., the Premier said in the House of Commons, Dec. 3, had been completed by P. Lyall & Sons, Montreal, at a cost of $63,700, and the contract for the superstructure had been let to Larkin and Sangster for $90,000. The original plans provided for a capacity of 2,000,000 bush., but it had been decided to erect at present a structure having a capacity of 800,000 bush. The work was expected to be completed by Sept. 1.

The Farmers' Grain Co. has been incorporated under the Manitoba Companies' Act, with a capital of $100,000 and offices at Heaslip, Man., to carry on a general grain buying and selling business, and in connection therewith to own elevators. The provisional directors are: E. W. Davis, Evanston, Man.; L. D. Maurier, P. P. Bottolfson, Starkweather, Man.; W. G. Samuel, W. Webster, M. Morrison, R. Sorenson, Webster, Man.; C. Todd, Grand Harbor, Man.: and A. G. Tanton, elevator manager, Lakota, Man.

The G.T.R. has just completed a new storage annex in connection with its grain elevator at Depot Harbor, Ont. The present elevator has a storage capacity of 1,000,000 bushels; an additional capacity of 500,000 bushels is added by the new building. The new structure is for storage purposes only. There is no machinery in it, excepting the conveyors for filling and emptying the bins, and the spouts to and from them. It is 196 ft. long by 80 ft. wide. The foundations are of reinforced concrete, the principal portion being a concrete slab, 15 in. thick, covering the entire surface of the ground beneath the building. The structure is divided into 84 bins, 65 ft. deep. Two 32 in. concentrated belt conveyors are installed for filling the bins, each conveyor being provided with a self-propelling tripper. Two conveyors of the same size are installed in the basement below the bins for emptying same. As the present elevator is built for receiving grain from boats, the belts filling the bins in the new house are designed to receive grain elevated by the marine leg and put it into storage. The belts below the bins discharge to shipping elevators in the present working house for loading to cars. The framing of the building is of heavy post and girder work, and the bin walls are of laminated 3 in. hemlock planking. The building is covered on the outside with galvanized corrugated steel. The work of construction was done by John S. Metcalf Co., Engineers, Chicago. The elevator has been in constant use since last season's northwestern wheat crop began to arrive at Depot Harbor in large quantities.

MARINE DEPARTMENT

Launching of the Midland Prince.

The Midland Navigation Co.'s steamship Midland Prince, which is the largest vessel built and owned in Canada for trading on Canadian waters, was launched on the Georgian Bay, Dec. 5. She is 489 ft. long, 55 ft. beam and 31 ft. deep, and will have a carrying capacity of 9,000 tons, or 300,000 bush. of wheat on a 19-ft. draft. The hull is of steel, built to meet the highest requirements of the underwriters, and with the most powerful and highest class of engines and boilers. At her launch the steamer had a displacement of 4,000 tons. She is built for the grain trade and for general bulk freight, and will carry 10,000 tons on a 20-ft. draft. The machinery includes two Scotch boilers, the largest ever built in Canada, 15½ ft. diameter by 12 ft. long between heads, and triple expansion engines 23, 38½ and 63 in. diameter by 42 in. stroke, 2,200 i.h.p. She is equipped with all the modern outfit of deck winches and steam mooring gear. Her outfit throughout is the best that can be made, and all round she is a most complete ship to handle and carry cargo safely and cheaply. The complete ship and outfit will cost $365,000. She will trade on the Upper Lakes between Port Arthur, Fort William, Ont., and Duluth, Minn., and ports on the Georgian Bay, Lake Huron and Lake Erie. The steamer was named as she left the ways by Miss Hays, daughter of C. M. Hays, Second Vice-President and General Manager, G.T.R., who was also present at the launch, accompanied by a number of other Montreal business men interested in transportation. There were, also, a number of invited guests from Toronto, Midland, etc.

After the launch, 260 guests were entertained at luncheon, Arthur Hill, of Saginaw, Mich., President of the Midland Navigation Co., occupying the chair; Jas. Playfair, Vice-President, and D. L. White, director, being the vice-chairmen. After the health of the King had been honored, Mr. Playfair, on behalf of the Navigation Co., presented Miss Hays with a hammered silver tea service.

C. M. Hays, in replying to the toast of Railway Transportation, pointed out that with the large bulk of freight moving eastward, water transportation by large freighters was essential, not only to the railways, but also to the far western country. He said that the railways were not jealous of the development of water transportation, looking at it as a twin handmaiden with the railway interests to the commerce of the country. He explained that the capacity of the Midland Prince was such that it would take a train of 300 cars to carry the load that she could carry from the head of the lakes to Midland. He further hinted of the possibility of another port besides Midland being developed by the G.T.R.

Other toasts were responded to by J. A. Cuttle, of the Montreal Transportation Co.; T. Harling, Montreal; A. Tilley, Montreal; Capt. T. Donnelly, Kingston, and others.

Atlantic and Pacific Ocean Marine.

The Allan Steamship Co. is arranging to secure new office accommodation for its passenger business in the Lower Town, Quebec.

The Allan Line S.S. Sarmatian arrived in Halifax, N.S., recently, having lost a blade off her propeller. She went into drydock there to have repairs made.

The C.P.R. S.S. Montezuma has been fined $400 by the customs' authorities at St. John, N.B., its boatswain having been detected taking a lot of cigars ashore.

The str. Deramore, for Dublin, Ireland, was the last steamer to leave the St. Lawrence for a transatlantic port in the season of navigation of 1906. She left Murray Bay, Dec. 6.

Vessels arriving at Halifax, N.S., Dec. 2, reported having experienced very rough weather. The Allan Line S.S. Tunisian reported the loss of five ventilators and her Marconi wireless telegraph apparatus.

The Montreal Harbor office reports that during the season of navigation 816 ocean-going vessels arrived and cleared, against 833 during the season of 1905. The aggregate tonnage was 1,968,979, against 1,940,056 in 1905.

Navigation opened at Montreal, April 29, 1906, and closed Dec. 2, the number of oversea vessels using the port being: 783 steamships of 1,957,615 tons and 33 sailing vessels of 11,364 tons, against 786 steamships of 1,918,002 tons, and 47 sailing vessels of 22,054 tons in 1905.

The Dominion Government has forwarded to the British Board of Trade awards for three officers and two of the crew of the S.S. Durango, in recognition of services to the crew of the schooner James W., of Charlottetown, P.E.I., abandoned in the North Atlantic ocean, Feb., 1904.

The Quebec Steamship Co. has placed an order with Sir James Laing & Sons, Sunderland, Eng., for a new steamship for its New York-West Indies trade. The vessel will be 345 ft. long, 44 ft. beam, and 27 ft. 6 in. deep, and will be fitted with tri-compound engines, cylinders 26, 43 and 71 in. diameter by 45 in. stroke.

The Dominion Line S.S. Kensington, from Montreal to Liverpool, picked up the disabled S.S. Briardene, owned in Halifax, N.S., and on a voyage from Bordeaux, France, to Liscomb, N.S., and towed her into Halifax. The Kensington stood by for two days before she could get a tow line on board. A claim for $40,000 salvage has been filed.

The Department of Marine appointed a commission, which sat at Halifax, N.S., Nov. 27, to investigate a complaint of the C.P.R. S.S. Empress of Ireland, that on the occasion of her entering Halifax with the mails she could not get a pilot, and was therefore delayed. Evidence was taken, and a report made to the department.

The C.P.R. S.S. Lake Manitoba left Montreal Nov. 26, and was the last passenger steamer of the season to sail from Montreal. The Manchester Trader for Manchester, the C.P.R. S.S. Montreal for London, and Elder-Dempster Co.'s S.S. Degamer sailed on Nov. 28, closing the St. Lawrence ocean-going traffic for the season.

The Liverpool Shipwreck and Humane Society has awarded silver medals to the officers and £2 each to the six men of the lifeboat's crew of the S.S. Vedamore for the recent rescue of the crew of the Battle Line S.S. Nemea in mid-ocean. The wreck of the Nemea is reported as having been passed by several steamers, the fire still being burning.

The Nova Scotia members of Parliament waited on the Dominion Government recently and urged that the C.P.R. be compelled to take steamers carrying mails alongside the wharf at Halifax, instead of lying in midstream and transferring mails to a tender; and also directing that passengers who desired to do so could be landed or taken on at Halifax.

The Liverpool Post-Mercury, which is usually very well informed in regard to marine matters, states that two new steamers have been ordered by the Dominion Line for the St. Lawrence trade. This report has been made so frequently within

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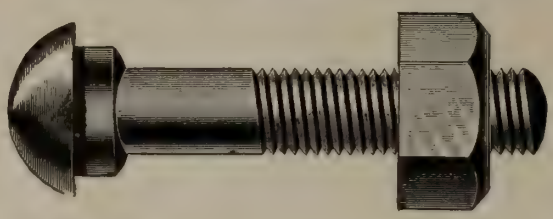

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the last two or three years that there will be many doubters, even although official confirmation be given.

It is stated that the North American Wrecking Co. will have sufficient repairs made to the Allan Line S.S. Bavarian, which it floated off Wye rock, Quebec, to enable her to be taken to the Clyde for permanent repairs. As the steamer will have to lie aground where she is for another winter, there is a good deal of uncertainty about any decision being arrived at before spring.

The S.S. Antilochus, the third of the new steamers for the Blue Funnel line, reached Vancouver, B.C., from Great Britain, Nov. 29. She is in all respects identical with the Teucer and Bellerophon, which have already been described. The Titan and Cyclops, also of the same dimensions, are under construction, and are expected to be put on the route during the summer.

One of the steamships which the Allan Line is having built on the Clyde to replace the Bavarian, will be about the same size as the Tunisian, and the second steamer which is being built will be slightly smaller and slower. The framing of the larger steamer has been completed, and as the strike in the shipyards has been settled, it is expected to have her ready for service about May.

The steamships which the Allan Line operates between Montreal and Havre, France, via London, Eng., during the summer, will make St. John, N.B., the winter port this season, calling at Halifax, N.S. The service will be performed by the Sardinian and the Pomeranian, giving a sailing every three weeks. The winter port for this service in previous years has been Portland, Me.

The survey of the Dominion Line S.S. Kensington at Quebec showed that the injuries sustained by her stranding near Matane were not serious. Repairs were made at Quebec, and the steamer loaded there for Liverpool, sailing Nov. 30. The steamer proceeded direct for that port, instead of going round to Halifax, as was originally intended. Complete repairs will be made in England.

A Glasgow, Scotland, report states that three steamers are under construction there for an Italian navigation company, to run between Italian ports and Canada, carrying freight and passengers. In connection with this report, the further report from Italy may be mentioned, that it is stated there that the Dominion Government has intimated its willingness to subsidize such a line of steamers to the extent of $80,000 a year.

The Minister of Trade and Commerce explained in the House of Commons Nov. 28, that the reason the Elder-Dempster Co.'s steamers performing the Canada-Mexico service on the Atlantic ocean did not call at Cuba on the northward trip, was because Mexico furnished one-half of the subsidy and objected to their calling at Cuba, which was a competing country. Canada, he explained, would object to its subsidized steamers calling at U.S. ports for cargo for Mexico.

The North American Wrecking Co., which was formed for the purpose of undertaking the salvage of the Allan Line S.S. Bavarian, having successfully accomplished that task, proposes to engage in wrecking operations in any part of the world. The officers and directors of the company, as it is at present constituted, are: President, T. J. Drummond, Montreal; Vice-President, E. W. Stokes, New York; Treasurer, W. G. Rainsford, New York; Secretary, H. W. Norton, Montreal; other directors: P. Molson, D. Armour, Montreal.

Maritime Provinces and Newfoundland.

Capt. H. Cann, of the Halifax and Cape Breton Steamship Co., died suddenly at St. John, N.B., Dec. 9.

E. C. Watson, Deputy Minister of Marine of Newfoundland, died in the Royal Victoria Hospital, Montreal, Dec. 13.

The St. John River steamers made their last trip to Fredericton, N.B., Nov. 26, the latest date for over ten years.

N. Chiasson has been appointed wharfinger at the Dominion Government wharf at Lameque, N.B., and Alex. Young wharfinger at Pinette, P.E.I.

J. W. Moran has been appointed wharfinger of the Dominion Government wharf at Freeport, N.S., and G. Henry has been appointed harbormaster at Egmont Bay, P.E.I.

The Dominion Atlantic Ry. str. Prince George is laid up at Yarmouth, N.S., at present, but is expected to be put on a run in West Indian waters at an early date.

The Montreal Transportation Co. is reported to have two steamers on order in Great Britain for carrying cargoes of steel rails from Sydney, N.S., to Upper Lake ports.

A. Gray has been appointed a member of the pilotage authority for the district of Sackville, N.B., and P. McKinnon has been appointed wharfinger at Wycocomagh, N.S.

The tug Ingraham has been practically rebuilt by the Reid-Newfoundland Co. at St. John's, Nfld. A new boiler has been put in and her engines are being thoroughly overhauled.

D. Campbell and A. Grady have each been presented with a purse of $220 and a medal for saving the lives of two sailors from the ship Sovinto, wrecked at Priest Pond, P.E.I., Nov. 6.

The Newfoundland Government has been engaged in improving the harbor of St. John's during the past year and will shortly invite tenders for dredging and other work for the coming season.

C. H. Hosterman, of the Department of Marine staff, Halifax, N.S., who was married there Nov. 28, to Miss A. M. Martin, was presented with a Morris chair by the staff of the Halifax office.

The str. Ruby L. was launched at Margaretville, N.S., for the Canning-St. John, N.B., route, Nov. 17. The hull was subsequently towed to Yarmouth, N.S., where the engines and boiler will be installed.

A three-masted schooner, named Reliance, was recently launched from the yard of G. A. Cox, Shelburne, N.S., for the West Indian and South American trade. The schooner will measure about 200 tons register, and will be commanded by Capt. J. Coumans.

Parrsboro', N.S., vessel owners are advocating the establishment of a Maritime Marine Association for the purpose of taking up all questions relating to the coasting trade, shipbuilding, etc., for the Provinces of Nova Scotia, New Brunswick and Prince Edward Island.

The Three Rivers Steamship Co., Prince Edward Island, is having built at Shelburne, N.S., the hull of a steamer for its freight and passenger trade. The hull, when launched, will be towed to Yarmouth, N.S., where her engines will be installed. Delivery will be made in the spring.

The Shepody Navigation Co., of which W. H. Edgett, Moncton, N.B., is local manager, has decided to purchase a second steamer for the service on Petitcodiac River and the Bay of Fundy. The company's present steamer, Wilfrid C. is no longer able to transport all the business offering.

From May 1 to Nov. 30, no less than 145 vessels have been placed on the marine railway at North Sydney, N.S., for repairs. The directors have under consideration a proposal to increase the capacity of the cradle so as to have room for vessels of 1,000 tons. James Mann is business manager of the company owning the plant.

The Dominion Government str. Minto was put on the route between Charlottetown, P.E.I., and Pictou, N.S., Dec. 10, and the Stanley has been put on the run between Summerside, P.E.I., and Cape Tormentine, N.B. The str. Empress made her last trip between Point Duchene, N.B., and Summerside, P.E.I., Dec. 7.

During the fall, the dredge Montague, which was completed at the Polson Iron Works Toronto, in the summer, was engaged in dredging a channel 1,200 ft. long, 55 ft. wide, and 10 to 12 ft. deep, at Crapaud, P.E.I. It is expected that there will be nearly another year's work at the harbor before the improvements are completed.

The St. John River str. Aberdeen has been sold by the Fredericton and Woodstock Steamboat Co. to Capt. Perry, of St. John, N.B. If the steamer is not placed on the Fredericton-Woodstock run in 1907 by her new owner, the Fredericton and Woodstock Steamboat Co. will secure a steamer of somewhat smaller size to trade between these points.

The French Government has revised the customs tariff of St. Pierre and Miquelon, in order to stimulate trade. For schooners entering the port for shelter or supplies the tax has been placed at 9c. per ton, instead of 25c. as heretofore; for vessels entering for the purpose of securing bait, 25c. instead of 55c., as previously; for trading craft the old rate of 56c. per ton remains.

An investigation has been ordered into the circumstances attending the stranding of a Norwegian schooner at East Point, P.E.I. One of the features in connection with the wreck was mentioned in the Senate, Dec. 6, by Senator Ferguson, who stated that the officials of the P.E.I. Ry. refused to get out a special train to take the lifeboat to the scene of the wreck unless a deposit of $60 was first made.

O. H. Taylor has been appointed Passenger Traffic Manager of all the steamship lines owned by C. W. Morse and his associates, which include the Eastern Steamship Co., trading between Boston, Mass.; Eastport, Me., and St. John, N.B. Mr. Taylor will have his headquarters in New York city. Pending a decision as to a permanent address he will have his offices on the People's Line wharf, pier 32, North River, foot of Canal st.

Tenders were invited in 1905 for the maintenance of a wrecking plant for the Maritime Provinces, but no contract was entered into. Up to Dec. 14, 1906, no decision had been reached as to whether any contract would be entered into or not. Halifax, N.S., papers of Dec. 15 state that the Halifax Salvage Co. has been formed there consisting of the firms of G. S. Campbell & Co., Beazley Bros., and S. S. Brookfield, Ltd., of that city, to perform salvage services. A barge purchased at the recent Admiralty sale at the dockyard, is being fitted with pumps, cranes and engines, with other apparatus necessary for wrecking purposes, and it is proposed to station this barge near the dry dock so that she will be readily available. One of the three tugs, F. W. Roebling, Togo or Shannon, will be kept in the harbor with steam up, ready to tow the barge wherever required. The Dominion Government proposal was to give a subsidy of $10,000 a year, and it is reported that a contract is about to be made with the Dominion Coal Co., to retain its tug, D. H. Thomas, as a salvage steamer at Sydney, N.S.

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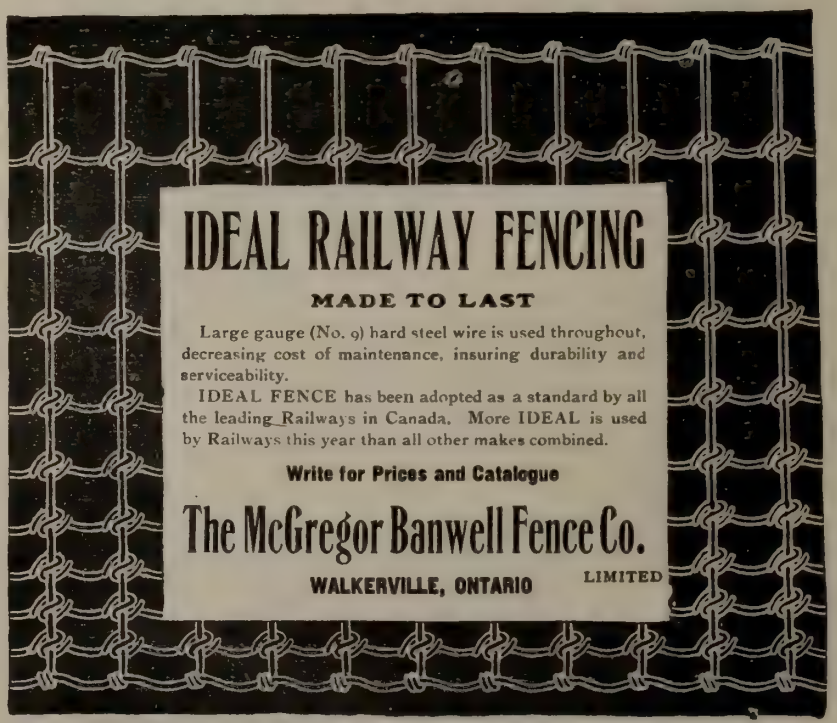

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Arr.	Lowell	*6.11 p.m.,	*7.17	a.m.
"	Worcester	†9.04 "	*9.13	"
"	Boston	*6.55 "	*8.05	"

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Lv.	Toronto		*12.01	p.m.
"	Niagara Falls		*3.31	"
"	Buffalo	*4.30 a.m.,	*7.20	"
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"	Worcester	*4.55 "	*9.59	"
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Province of Quebec Marine.

The Quebec Transportation and Forwarding Co. has purchased the barge A.D., of Montreal.

The tug Beaver, which was being broken up near the Palais, Quebec, was burned Dec. 14. She was uninsured.

During the season of navigation of 1906, 12,557 vessels of 3,095,174 tons arrived at Montreal from inland points.

The port of Grand River, Que., has been declared an outport of customs and warehousing port under the survey of the port of Perce, Que.

The following have been elected members of the board of pilots for and below the harbor of Quebec: A. Larochelle, L. A. Morin, C. Raymond, A. Pouliot, L. Thivierge and J. Talbot.

The Quebec Harbor Commission has prepared plans for the equipment of cranes and other facilities for the rapid handling of cargoes at the Louise docks and Point-a-Carcey wharf.

The Department of Marine is considering tenders for the supply of steel plates and shapes required for the construction of a dipper dredge at the Government dockyard, Sorel, Que.

F. L. Gagnon, Assistant Engineer Montreal Harbor Commission, was presented with a set of table silverware and cutlery by the staff, upon his recent marriage to Miss E. Lecavalier.

The Quebec agency of the Department of Marine and Fisheries is required to move from its present quarters, which are needed in connection with the National Transcontinental Ry. terminals.

The Hamilton str. Dundurn left Montreal, Dec. 3, for Hamilton, Ont., and managed to get through the Lachine Canal, but got icebound in Lake St. Louise, where she will remain during the winter.

The Dominion Government str. Rouville, which has been on pilot duty at Father Point, Que., is wintering at Les Eboulements, Que., it having been found that the ice was too thick to take her on to Quebec.

The Lake St. John and Saguenay Navigation Co. is reported to be negotiating for the purchase of a passenger steamer to run on the Saguenay River. The company is owned by interests connected with the Quebec and Lake St. John Ry., and has a fleet of steamers on Lake St. John.

The Department of Marine informed the Quebec Board of Trade Nov. 28 that it has been arranged that the steamers Montcalm and Lady Grey will make several trips to North Shore points during the winter, but that the dates of the trips and the points to be visited had not been definitely arranged.

The tug Spray, owned by J. S. Thom, Quebec, has been wrecked at Madam Island, Que. Contrary to expectations, the owners were able to float the tug, and she was taken to Levis between two batteaux. An examination showed that the bottom planking has been ground out by the pounding upon the rocks.

La Compagnie-Generale du Port de Chicoutimi, Que., has deposited with the Minister of Public Works, Ottawa, plans of the works which it is intended to construct at Chicoutimi Basin, and duplicate plans have been filed with the registrar of the county. The approval of the Government is being asked for the plans.

The report of the International Waterways Commission is understood to be against the proposal to construct a canal from Lake Champlain, N.Y., to the St. Lawrence River. The project is being opposed by the Canadian interests on the ground that the construction of the canal would only benefit U.S. marine interests.

A. J. C. Robertson, A.M.I.N.A., Naval Architect, is to give a series of four popular lectures on ships and shipbuilding under the auspices of the Montreal Y.M.C.A., to which all interested in shipping are invited. The first lecture, on Jan. 17, will be on "The evolution of the modern ship," and will be followed on the three succeeding Thursday evenings by "Science in shipbuilding," "Designing the ship," and "Building the ship."

The Dominion Government has appointed the Commissioners for Montreal Harbor as follows:—G. W. Stephens, chairman, C. C. Ballantyne and L. E. Geoffrion. The chairman, will receive $7,000 a year, while the others will be paid $5,000 a year each. They will be expected to devote the whole of their time to the duties of the office. It was stated in the House of Commons, Nov. 30, that the name of Hon. J. I. Tarte had been considered for the chairmanship, but that he had declined.

The General Metal Foundry and Machinery Co. has been incorporated under the Dominion Companies' Acts, with a capital of $199,900, and offices at Montreal, to take over the business of Lymburner and Mathews, engineers, machinists, brass founders, etc., and to carry on and extend the same. Power has also been taken to carry on the business of builders of ships and dredges, and to trade as shipowners. The provisional directors are: M. E., L. M., H. N. Lymburner, J. E. Mathews, J. B. Mathieu, Montreal; and A. St. Georges, St. Paul, Que.

The construction of steel sheds at the Montreal wharves, which has been going on for a couple of years past, will, it is expected, be completed so far as seven sheds are concerned, by the opening of navigation in the spring. The plans for the sheds, as finally passed by the commissioners, did not meet with the approval of the steamship owners, and the result was a number of meetings between the interested parties, and a compromise. These negotiations considerably delayed the contractors—P. Lyall & Sons—in getting ahead with the work, and those of the sheds which should have been ready for the season 1906, were only partially completed.

The Anchor Line str. India has been purchased by the Lake Erie Steamship Co., which will place her on a run between Montreal and Toledo, Ohio. It is understood that the India will be renamed City of Toronto. The company, when organized, purchased the Anchor Line str. China, and had her renamed City of Montreal. The India is a three-deck vessel of about 1,600 tons, and has good accommodation for passengers. The officers and directors of the company are: President, Jas. Carruthers, Montreal; Vice-President, W. D. Matthews, Toronto; General Manager, C. A. Jaques, Montreal; other directors: H. Munderloh, Montreal; J. H. Hall, Ottawa; S. Samuel, Toronto.

Judgment has been delivered in the Quebec courts in the various actions arising out of the collision of the Bay State, and its tows, the barges Berkshire and Bath, with the str. Universe, and the Montreal Harbor Commissioners' dredge. The Harbor Commissioners recover damages against the Bay State and the barge Bath; and its actions against the barge Berkshire and the str. Universe are dismissed; the action by the owner of the barges against the str. Universe is dismissed; and damages are given to the str. Universe against the owners of the Bay State and the barges Berkshire and Bath. The costs in the various actions are divided out in different proportions among the several parties. The questions of damages and of the amount of costs to be paid by the several parties were referred to the Deputy Registrar of the Exchequer Court

The Judicial Committee of the Imperial Privy Council, London, Eng., has dismissed the appeal of the Richelieu and Ontario Navigation Co., in the suit between that company and the Dominion Coal Co., as a result of the collision between the Canada and the Cape Breton off Sorel, Que., in June, 1904 The R. and O.N. Co.'s str. Canada was sunk, with the loss of five lives, as the result of the collision, and cross actions for damages were taken in the Admiralty court at Quebec. This court adjudged both vessels to blame, and directed that amount of damages to be paid by each vessel be apportioned by the Registrar. Upon appeal to the Supreme Court by both parties, the Canada was found to be solely to blame, and her owners were directed to pay damages to the owners of the Cape Breton. This decision has now been upheld by the final court of appeal, with costs. The damages to the Cape Breton are estimated to be about $80,000, and the costs of the action will be very heavy.

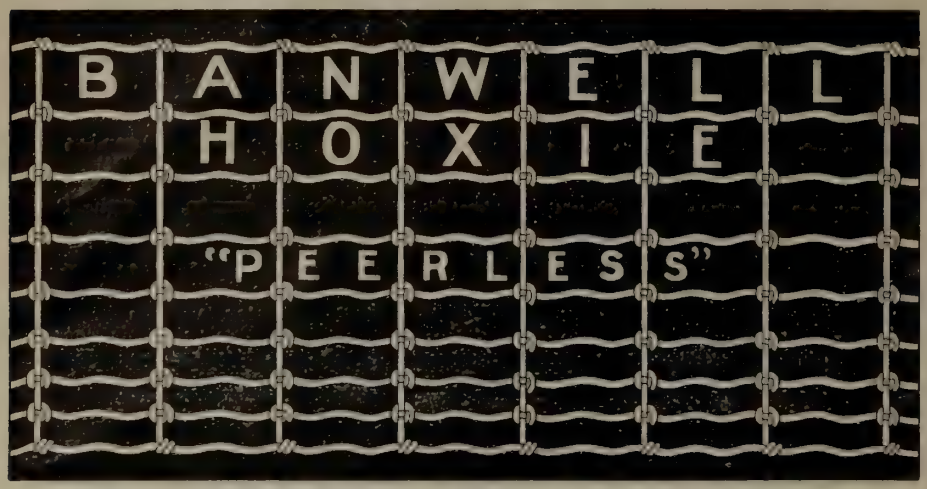
A bill has been introduced into the House of Commons having for its object the provision of free transportation of members of Parliament upon all inland steamship lines, in the same way as is done in the case of railways.

H. Mathers, Halifax, N.S., has been appointed to represent Canada as a member of the Imperial Commission which is going to enquire into the existence of an alleged shipping combine. Jno. Torrance, of Montreal, declined to accept the position.

The suction dredge Galveston, which the Dominion Government purchased at New Orleans, La., cost $146,000; repairs and fittings cost $10,942.14, and insurance $4,574.14. The dredge has been employed on the St. Lawrence channel, and during Dec. was working at St. John, N.B.

A. P. McKeen, who was drowned in the Cowleitz River, Ore., recently, while saving a deckhand who had fallen overboard, was a son of W. H. McKeen, of Hagersville, Ont. He was one of the men saved from the Islander when she struck on a reef near Skagway, in 1901, and was also in the wreck of the Clallen between Townsend and Victoria, B.C.

A deputation representing certain of the shipbuilding yards of Canada, waited on the Minister of Finance at Ottawa, Dec. 10, to discuss the subject of an increase in the bounty upon shipbuilding in Canada. It was pointed out that the shipbuilding companies are handicapped by reason of the fact that much of the material which they require in the course of business has to be imported and duty paid on it. The only offset to this is a bounty of $1.15 per ton, which, in the case of a 10,000-ton steamer would only amount to $11,500, while on the other hand, the duties paid upon material entering into construction of the vessel would range all the way from $25,000 to $30,000. In addition to this handicap, the Canadian shipbuilding firms have to contend with the competition of the British shipbuilders, whose vessels come into Canada free, and the extent of this competition may be gauged by the fact that at the present there are 170 British-built vessels plying on the Great Lakes. The deputation emphasized the fact that they did not wish to interfere with the tariff arrangement as it applies to British vessels, but they strongly urged that the bonus on Canadian-built ships be increased to at least $4 a ton.



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" "	7.50	"	"	179.75,	" "	61.22	"	"	150.00
" "	8.00	"	"	196.70,	" "	65.28	"	"	160 00

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Ontario and the Great Lakes.

The S.S. Turbinia was not chartered to go south this winter, but is laid up at Toronto.

The str. Beaver, owned by C. White, Lakefield, Ont., was burned at her dock on Rice Lake, Ont., Dec. 7.

Capt. A. Curtis, of the Detroit, Belle Isle and Windsor Ferry Co.'s fleet, died at Windsor, Ont., Dec. 4.

Capt. O. Beatty, one of the oldest lake captains in Ontario, died at Hamilton, Ont., Nov. 28, aged 89.

Water was let out of the canal at Ottawa Dec. 1, and navigation on the river was closed about the same time.

The Dominion Government estimates for the current year provide $100,000 for harbor improvements at Toronto.

Jas. Playfair, of the Midland Navigation Co., Midland, Ont., has purchased a new yacht to replace the Margueretta.

The Dominion Government is arranging to establish life saving stations mainly along the gulf shore of Prince Edward Island.

The G.T. Pacific Ry. dock at West Fort, Fort William, Ont., collapsed Nov. 19, and 50 ft. slipped into the river, carrying with it 800 tons of steel rails.

"The Georgian Bay ship canal, from Georgian Bay to Montreal," said Hon. R. Lemieux, in a recent speech at Montreal, "is a thing of the near future."

The Brockville Navigation Co.'s str. Victoria sank at her moorings at Brockville, Ont., Dec. 7. She was injured on Dec. 6, in a collision with the tug Queen.

The Kingston schooner Queen of the Lakes foundered off Sodus Point, N.Y., Nov. 29, and the crew reached Kingston, Ont., on the following day in their small boats.

Regulations have been approved for the governance of a ferry across the Rainy River between the town of Rainy River, Ont., and the towns of Beaudette and Spooner, Minn., U.S.

H. S. Osler, K.C., Toronto, has been appointed by the Ontario Government as counsel to represent it in the settlement of the International boundary line through Lake Erie.

The Montreal Transportation Co.'s str. Fairmount went ashore near Snake Island, Kingston, Ont., Dec. 9, and was lightened before she was got off. The damage is not serious.

There was an ice jam at Sault Ste. Marie, Ont., Dec. 7, when 20 vessels were caught. An attempt was made to release them by ice-crushing steamers, and the jam was broken Dec. 11.

The str. Turret Crown, operated by one of the Mackenzie, Mann & Co. undertakings, went aground near Grand Marias, Lake Superior, Nov. 27, while bound for Duluth, Minn., without a cargo. She was subsequently got off uninjured.

The str. Jessie Bain, which was operated under charter during the past season of navigation by the Rathbun Co., was returning to Kingston, Ont., Dec. 3, when her hull was pierced by ice and she sank after reaching the slip.

Navigation closed at Toronto Dec. 8, when the Hamilton Steamboat Co.'s str. Macassa left for Hamilton, and the Niagara, St. Catharines and Toronto Navigation Co.'s str. Lakeside arrived from Port Dalhousie, Ont.

The estimate of the underwriters is that the season of navigation of 1906, represents the loss of 137 lives, and property valued at over $2,000,000, upon the Great Lakes. Canadian boats suffered heavily during the season.

The str. City of New York, which went aground near Coteau Lake, Ont., was got off uninjured, and was taken to Cornwall, Ont., where she will remain for the winter. Her cargo will be transferred to the railway and taken on to Montreal.

During the ten years ended June 30, 1906, the Dominion Government expended $1,404,267.67 through the Department of Railways and Canals, and $828,187.86, through the Department of Public Works, upon the improvements at Port Colborne, Ont.

The Montreal Corn Exchange has endorsed the resolution passed by the Kingston Board of Trade in favor of the deepening and widening of the Welland Canal, so that it can be navigated by the same size vessels as can pass through the Sault Ste. Marie canals.

The Department of Marine has arranged for the delivery of a series of lectures in Toronto, two nights a week, until the end of Feb., upon seamanship and navigation. The lectures are free and are open to all who are interested, The first lecture of the series was delivered Dec. 4.

The U.S. Chief of Engineers has reported adversely against the proposal to cut a 25-ft. channel between Chicago, Duluth and Buffalo. He says that no deepening of the channel should be commenced until it is demonstrated that a 20-ft. channel will not meet the demands of commerce.

The steam barge Hickox, from Oswego to Belleville, Ont., with coal, caught fire on the trip, and was beached at Main Ducks Island, Dec. 2. The crew were compelled to stay on the island until Dec. 4, before the weather moderated sufficiently to enable them to leave in their small boat.

The boiler of the tug Georgiana burned out while she was towing a barge from Silver Islet to Port Arthur, Ont., Dec. 7. The boat finally made the shore under sail, and the men tramped to the C.P.R. near Sawyer's Bay, where they were picked up by a freight train and taken into Port Arthur.

Capt. Lesslie, of the North American Wrecking Co., was given a public welcome upon his return to Kingston, Ont., after the successful floating of the Allan Line S.S. Bavarian. He was presented with a piece of silver plate by the citizens as a recognition of his service to marine interests.

The last lock on the stretch of the Trent Valley canal between Healey's Falls on the Trent River, and Lake Simcoe, Ont., has been completed, and will be opened for navigation in the spring. The lock is situated at Kirkfield, Ont., and is of the hydraulic lift type, affording an elevation of 50 ft.

The str. Eleanor, of the Parry Sound Yacht Co.'s fleet, while out taking in buoys and lights for the Marine Department in Georgian Bay, got on to a shoal near Pancake Island, Dec. 7. The crew were taken off by another of the company's steamers, but the Eleanor will have to remain until the spring.

The estimates placed before the U.S. Congress for expenditures on harbors and rivers during 1907, provide for $500,000 at the falls of St. Mary's River, Mich.; $1,000,000 on Hay Lake and Neebish channels, St. Mary's River; $300,000 on Detroit River; $222,000, Black Rock harbor and channel, N.Y.

The Canadian Supreme Court has under consideration an appeal in the case of the D. C. Whitney against the St. Clair Navigation Co. and the Southern Coal and Transportation Co. The main question involved is as to the jurisdiction of the Admiralty Courts in Canada to try a case of collision between two U.S. vessels in a U.S. port.

A decision has been given by Justice Clute, at Chatham, Ont., that the River Thames, at Kentbridge, Ont., is a non-navigable stream, and that the plaintiff owned the land as far as the centre of the stream. The action arose out of a claim made by Pickard and Avery to take sand from the bed of the river on the ground that it belonged to the Crown.

It was stated in reply to a question in the House of Commons, Nov. 28, that $2,031 had been expended by the Department of Public Works in having a survey made of the River Thames as far as Chatham, Ont. No decision, however, had been reached upon the question of deepening the channel of the river from its mouth to Chatham to a depth of 18 or 20 ft.

Unconfirmed reports state that the C.P.R. has decided to build three new steamers for its Upper Lakes trade. Some time ago it was announced that a contract had been placed for a new Upper Lakes steamer by the C.P.R., for delivery in the spring, but it is now stated the contract has been abandoned, as the shipbuilding company cannot undertake to make delivery.

Following is a statement of grain shipments out of Port Arthur and Fort William for the season of 1906 up to Nov. 30, in bushels: Wheat, 34,377,837; oats, 4,659,068; barley, 574,848; flax, 282,145; total shipments, 39,893,898; total shipments in foreign bottoms, 8,222,167: shipments in Canadian bottoms for Nov., 1906, 7,710,496, against 6,895,716 in Nov., 1905.

Replying to a question in the House of Commons, Nov. 28, the Acting Minister of Public Works stated that the Chief Engineer in charge of surveys upon the proposed Montreal-Georgian Bay canal had presented two interim reports, and the final report was expected to be ready for presentation during Jan. No approximate estimate of the cost of the work had been prepared.

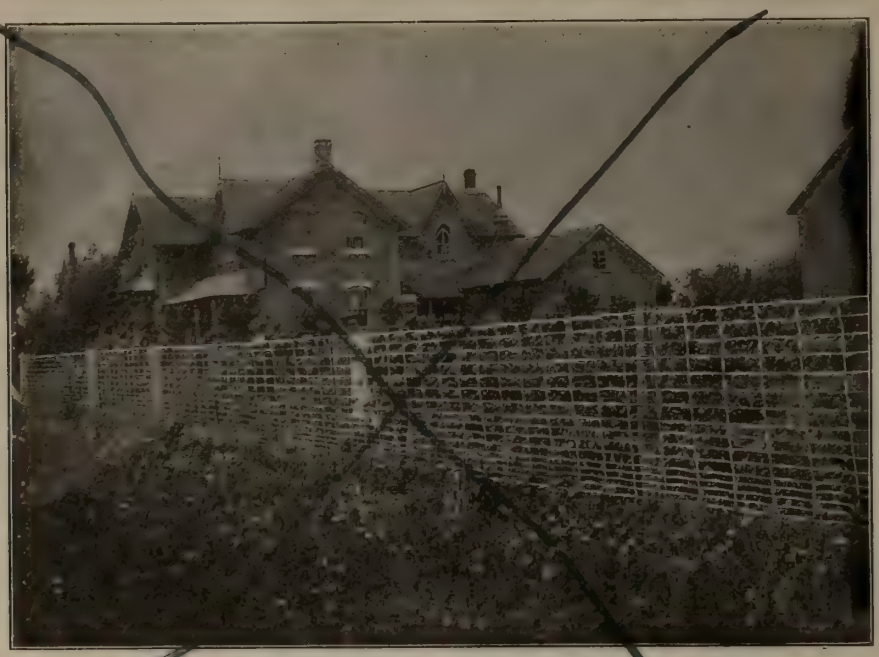
The Lakes to the Gulf Deep Waterway Association has been formed in St. Louis, Mo., for the purpose of promoting the construction of a deep waterway from the Chicago Drainage Canal through the valleys of the Des Plaines and Illinois Rivers, to the Mississippi River at Grafton, Ill., thence down that river to St. Louis. The minimum depth which it is desired to obtain is 14 ft.

A sitting of the Admiralty Court was held in Hamilton, Ont., Nov. 27, for the purpose of hearing a claim against the str. Dundurn, brought by one of the engineers, named Allison. Judge Hodgins, after the question of an adjournment had been discussed, induced the parties to effect a settlement. This is the first occasion upon which the Admiralty Court has held a sitting in Hamilton.

The bill which the U.S. Congress has under consideration for the improvement of harbors and rivers, includes $10,000,000 for the construction of a third lock at Sault Ste. Marie, Mich.; $500,000 for the proposed canal to connect the lake at Buffalo with the terminus of the 1,000-ton barge canal at Tonawanda, N.Y.; and $2,000,000 on account of the improvement of the Detroit River, chiefly at the Limekiln crossing near Amherstburg, Ont.

The Hamilton str. Golspie, which has been doing service on the Upper Lakes as a lighthouse tender, went ashore near Brule Bay, Lake Superior, Dec. 4, and has become a total wreck. The captain and five of the crew remained by the vessel, and the mate with the rest of the crew set out to row to Michipicoten harbor. The first mentioned were rescued by a tug, Dec. 9, and the others reached Michipicoten after having a rough time.

The Dominion Fish Co.'s tug J. H. Jones, of Owen Sound, Ont., was wrecked during a recent storm on Lake Huron, with the loss of 26 lives, passengers and crew. The steamer left Owen Sound, Nov. 22, on her usual route, collecting boxes of fish from the various fish-



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ing stations, and was last seen to pass Cape Croker lighthouse the same afternoon. The steamer was a good boat of her class, and is thought to have been overwhelmed by the heavy seas prevailing during the storms.

The new steamer which the Farrar Transportation Co., of Collingwood, is having built for the Upper Lakes trade, will be ready for launching in May. Her dimensions will be: length, 406 ft.; breadth, 50 ft.; depth, 28 ft.; and she will be fitted with triple expansion engines, cylinders 21, 37 and 42 in. diameter, by 42 in. stroke, to which steam will be supplied by two Scotch boilers, 14½ ft. diameter by 12 ft. long. It is expected that the engines will have 1,600 indicated horse power.

The Upper Ontario Steamboat Co., which was recently incorporated under the Dominion Companies' Acts, with a capital of $99,000 and offices at New Liskeard, Ont., to carry on a general navigation business on Lake Temiskaming and adjacent waters, will take over the steamers Gypsie, Geshia, and Blanche, and a number of scows. The vessels were previously operated by Brickenden and Hendry, who are the practical members of the company, the other directors being: M. R. Jennings, G. C. Banks, and F. L. Smiley, of New Liskeard.

The Algoma Central Ry. str. Theano struck on a rock near the entrance to Thunder Bay, Nov. 18, was washed off by the heavy sea and sank. She had a cargo of 2,044 tons of steel rails on board for the National Transcontinental Ry. construction. Capt. Sinclair, who has been looking into the matter of the loss of the Theano, and the str. Strathmore, for the underwriters, says that there is nothing left to show where the Theano sank; the depth of water in the vicinity is 400 ft. The Strathmore was burned after she went ashore on Michipicoten Island.

The Great Lakes Dredging Co. was given a contract by the Dominion Government for keeping the harbors of Port Arthur and Fort William, Ont., open during the season of navigation of 1906. By the use of the specially constructed tug James Whalen, and other vessels, the harbors were kept open until Dec. 12, when the last steamers left. The Wacondah, one of the last of the vessels to leave, returned Dec. 16, her cargo having shifted owing to the heavy weather. She will remain at Port Arthur for the winter. The Reid Co.'s tug Manistique also arrived in Port Arthur, Dec. 16. She was towing the barge Ireland, but owing to the heavy weather had to abandon it at anchor off Sand Island.

The Trent Valley Canal was under discussion in the House of Commons for a brief period Dec. 3. The Premier stated that the canal in its present incomplete state had proven to be of material advantage to the district which it served, and justified the policy of the construction of branches as feeders. While the Government had not sufficient information to enable them to form an opinion upon the merits of the Gull River from Coboconk northward, the opening up of which was advocated by Col. S. Hughes, M.P., he thought the county which it would open up was more suited for forest reserve and tourist purposes than it was for agriculture. W. H. Bennett, M.P., advocated the immediate completion of the canal by the Severn River route, and T. H. Lennox, M.P., advocated the survey of the route from Barrie via the Nattawasaga River.

The grain section of the Toronto Board of Trade, in connection with the loss of the barge Resolute, with six lives, off Toronto, has passed a resolution asking the Dominion Government to improve and deepen the western channel to 14 ft., and the eastern gap to 18 ft., so that vessels could enter in any weather. The section also recommended the purchase of a fire tug, to be manned with a life saving crew. Replying to a question in the House of Commons the Minister of Marine said a fully equipped surf boat was kept at the harbor, and the equipment was under the charge of Capt. W. Ward, who lived on the Island. The question of what further protection was necessary was under the consideration of the Department. An investigation was held at Toronto, Dec. 3, before Commander Spain, Wreck Commissioner, assisted by Capt. T. Donnelly, Kingston, Ont., and Capt. J. W. Trowell, of the str. Persia, into the circumstances attending the loss of the vessel. Judgment was reserved.

The Northern Navigation Co.'s str. Monarch, while on her last trip for the season from Port Arthur to Sarnia, Ont., struck on Isle Royal, Lake Superior, during the night of Dec. 8. The passengers and crew, numbering 41, were got off safely with the exception of one watchman, who was drowned. The rescued people were on the island until Dec. 10, having no shelter and but little to eat, until tugs arrived from Port Arthur and took them off. The news was taken into Port Arthur by the str. Edmonton, which was unable to get near enough to the rocky island to effect a rescue. The Monarch has pounded to pieces, and no attempt will be made to get her off. She was valued at $85,000. On Dec. 15, Capt. Robertson, of the Monarch, was given a purse of gold and an address by the people of Port Arthur, as a mark of respect. The company's str. Ionic also ran ashore during the same snow storm about a mile from Whitefish Point, Lake Superior, but was released by tugs Dec. 11, without having sustained any material damage.

Replying to a question in the House of Commons, Dec. 12, the acting Minister of Public Works stated that the depth of water in the eastern entrance to Toronto harbor was 16 ft. 6 in. and in the western entrance 9 ft. 6 in. This is not sufficient for the purpose of navigation at all times and in all weathers. Several communications had been received by the Government from the city of Toronto, the Harbor Commissioners and other persons during the past five years, complaining of insufficient depth of water at these entrances. Three instances of vessels going aground or becoming wrecked because they were unable to obtain access to the harbor, had recently been called to the attention of the Government. The Government had already taken action towards deepening these entrances. During the past three years 89,348 yards of material had been taken out of the eastern entrance, while the Harbor Commissioners for the same period has removed 70,129 yards from the western channel. The channels were constantly filling up, owing to the nature of the material, and its being washed in again.

The Lake Superior and Hudson Bay Development and Canal Co. is the title under which an act of incorporation is being sought at the current session of the Dominion Parliament by certain interests represented by A. Honeywell, solicitor, Ottawa. The company desires to have power to locate and construct a canal, canals or system of canals, to build dams, create storage for water, divert streams and otherwise to control the flow of water so as to improve the natural waterways, and create a navigable waterway between Lake Superior, James Bay and Hudson Bay, by way of Nepigon River, Nepigon Lake, the water stretches between Nepigon Lake and the Albany River, the Albany River to James Bay, by the water stretches between the Albany River and the Severn River, and by the Severn River to Hudson Bay, to complete such navigable canal or canals sufficient to enable vessels of deep draught to pass in safety through the same; to construct, maintain and operate terminals, wharves, docks and warehouses in connection with the same; to develop and deal in electrical power; to own and operate steam and other vessels and to carry on a general navigation business; to levy tolls for the use of the canals and other facilities; to construct railways and tramways, telegraph and telephone lines, bridges, ferries and such other works as may be necessary, and to carry on a number of businesses in connection with the enterprise.

Manitoba, Saskatchewan, Alberta, Etc.

The Globe Lumber Co. has been incorporated under the Manitoba Companies' Act, with a capital of $60,000 and offices at Winnipeg, with power, among other things, to operate steam or sailing vessels and barges. H. C. Webb, A. Lucas, C. W. Tait, A. B. Donley, C. W. Bradshaw, Winnipeg, are the provisional directors.

L. McCarthy, M.P., has reintroduced, for the fourth time, at the current session of the Dominion Parliament, a bill to amend the Steamboat Inspection Act, 1898. The object is to require that engineers on steamboats over a fixed tonnage shall have a certificate from the Department of Marine. At the last session the bill was referred to a special committee, and was not reported back to the House of Commons.

The Toronto branch of the Navy League has adopted the following resolution: "That it is not consistent with the true interests of Canada, either from a political or from an economic point of view, that we should continue to neglect all preparation to take our part in the naval defence of the British Empire, and that it is a duty we owe to ourselves, to our floating commerce, and to the Empire, that we should lay the foundations of a broad national maritime policy, in which naval preparation will go hand in hand with the development of a Canadian mercantile marine, with the encouragement of the Canadian shipbuilding industry, and with securing for Canada her fair share of the world's maritime transportation."

The report of the International Waterways Commission upon the application of the International Development Co., for permission to construct regulating works on the Richelieu River and canals, under the charter of the Lake Champlain and St. Lawrence Ship Canal Co., has been issued. While the works proposed, plans of which, however, were not submitted, are to be entirely in Canada, their operation will affect the levels of Lake Champlain in New York State. The Commissioners are of opinion that it is not desirable that either nation should obstruct the natural flow of streams crossing the International boundary to the injury of public or private rights in the other. The applicants should be compelled to furnish evidence that public or private rights will not be injuriously affected by the carrying out of the suggested works; and that the company be compelled to operate the canals under such regulations affecting the levels of Lake Champlain as may be approved by the Secretary of War at Washington. The report concludes: "We respectfully submit that in any treaty to be had between the two nations in relation to the use of international waters, the principles above suggested should have consideration. We would further suggest that the applicants' Canadian act of incorporation should be amended so as to provide that the maintenance of the works sought to be erected shall be conditional at all times upon compliance with all regulations imposed by the Secretary of War of the United States from time to time for the preservation of the levels of Lake Champlain."

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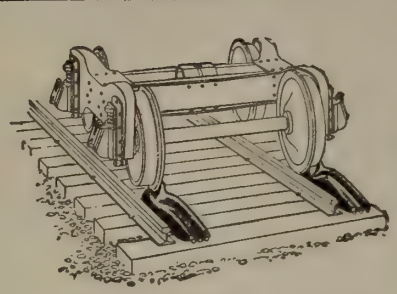

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The Skeena River str. Pheasant is reported wrecked near Beaver Dam, and will be a total loss. The crew were saved and reached Vancouver Nov. 27.

The revocation of the appointment of Aulay Morrison as Deputy Judge in Admiralty of the Exchequer Court of Canada for the district of British Columbia is announced.

The Vancouver Tug and Barge Co. has been incorporated under the British Columbia Companies' Acts, with a capital of $100,000 and offices at Vancouver, to carry on a general towage and lighterage business.

The steamers Iroquois and Chippewa, which are on the way from the Upper Lakes to the Pacific Coast, are to be converted into oil burners on their arrival there. They are expected to reach Seattle, Wash., early in Feb.

The steam whaler St. Lawrence has been purchased in Newfoundland by Victoria, B.C., owners, represented by Capt. Balcom. The steamer is on her way to the Pacific Coast, and is expected to reach Victoria early in Feb.

J. C. Kinghorn, Victoria, has been appointed an inspector of hulls and equipment of steamboats for such ports in the Province of British Columbia as may be designated by the Minister of Marine and Fisheries. He will have his office at Victoria.

The new lighthouse has been completed at Cape Beale, B.C., by the Dominion Government, and the temporary light has been removed. It is intended to replace the illuminating apparatus with a modern quick-flashing light early in the year.

The Canadian Fish Co. is converting its fishing trawler Celestial Empire into a dory steamer, owing to the lack of success as a trawler. The Celestial Empire, and two or three other trawlers, were brought out from England, early in 1906, for the fisheries off the B.C. coast.

The Tidal and Current Survey branch of the Department of Marine has issued tide tables for the Pacific coast of Canada for 1907 The waters included in the tables are Fuca Strait, Strait of Georgia, and the northern coast, and there are also included data for slack water in the navigable passes and narrows.

A Victoria, B.C., press report states that a number of English and Scottish firms are interested in a project to combine the small shipbuilding and repairing yards upon the B.C. coast, and concentrating them at Esquimalt, where a yard will be laid out with accommodation for the construction and repair of the largest ocean-going vessels.

All the civil actions arising out of the collision between the C.P.R. str. Princess Victoria and the Chehalis in July, 1906, have been consolidated and a decision of Justice Morrison is to the effect that the cases shall be tried without a jury, but that the presiding judge may call in two nautical assessors to assist him upon questions of seamanship. The plaintiffs are appealing against this order.

The Pacific Coast Steamship Co. is being sued by the San Francisco, Cal., pilots for pilotage fees at that port, on the ground that as the company's steamers touch at Victoria, B.C., they arrive from a foreign port. R. P. Rithet & Co., the company's B.C agents, have communicated with the Victoria Board of Trade upon the matter, and pointed out that in the event of the decision being against the company, the call at Victoria may have to be cut out.

It is expected that the arrangements between the Dominion and Imperial Governments respecting the transfer to the former of the dockyard property at Esquimalt, B.C., will shortly be completed. The Dominion Government has several steamers on the Pacific coast, for which the present wharfage accommodation at Vancouver and Victoria is insufficient. It is understood that the whole of the vessels will have their headquarters at Esquimalt when the transfer takes place.

Notices to Mariners.

The Department of Marine, Ottawa, has issued the following notices to mariners:

No. 129. Nov. 8.—Nova Scotia—318. Southwest coast, Cape Sable, change in fog alarm. 319. South coast, Sambro, temporary change in light. 320. Cape Breton Island, Gulf of Canso, Bear Island, lighthouse established. New Brunswick—321. Chaleur Bay, Restigouche River, Campbellton, front range lighthouse moved. Labrador—322. Domino run approach, Deer Island, shoal to the northward.

No. 130. Nov. 12.—New Brunswick—324. Bay of Fundy, Chignecto channel, Cumberland basin, Ward point, light improved. Nova Scotia—325. South coast, Little Hope, temporary light. Labrador—328. Strait of Belle Isle, Red bay, Saddle Island, light established.

No. 131. Nov. 12.—Ontario Lighthouse division—329. River St. Lawrence, Lake St. Francis, Lancaster bar, gas buoy established. Ontario—330. Georgian bay, east side, approach to Parry Sound, change in character of light.

No. 132. Nov. 12.—British Columbia—331. Vancouver Island, west coast, Clayoquot sound, Templar channel, Lennard Island, change in characteristic of fog alarm. 332. Queen Charlotte sound, New channel, Christie passage, Balaklava Island, Scarlett point, hand fog horn at light station.

No. 134. Nov. 13.—Ontario Lighthouse division—334. Quebec, Ottawa River, north shore, Way channel, and Besserer crossing, range lights established.

No. 136. Nov. 15.—Quebec—337. Ottawa River, Calumet wharf, wrecks removed. Ontario—338. Lake Erie, Pelee passage, wreck of Tasmania removed.

No. 137. Nov. 15.—Quebec—339. Chaleur bay, north side, Port Daniel West, lighthouse established. 340. Chaleur bay, north side, Port Daniel, color of light to be changed.

No. 138. Nov. 16.—British Columbia—341. Vancouver Island, Victoria harbor, Laurel point, change in position of light. Alaska—342. Norton sound, St. Michael's Island, Cape Stephens, light established.

No. 139. Nov. 17.—Quebec—343. River St. Lawrence, St. Simeon, light established.

No. 140. Nov. 17.—New Brunswick—344. South coast, Bay of Fundy, Passamaquoddy bay, St. Andrew's bar, Navy Island, light improved. 345. Northumberland strait, Richibucto harbor entrance, range lights on south beach temporarily extinguished, bell buoy adrift. Nova Scotia.—346. South coast, Tusket River entrance, Pioneer rock located and buoyed. 347. Cape Breton Island, east coast, Sydney harbor entrance wreck removed.

No. 141. Nov. 19.—Nova Scotia—348. South coast, off entrance to Sable Island, Bantam rock, bell buoy established.

No. 142. Nov. 21.—Nova Scotia—350. West coast, Yarmouth Sound, Hen and Chickens, gas and bell buoy to be established. Prince Edward Island—351. South coast, Bedeque bay, Miscouche shoal, gas buoy established.

No. 143. Nov. 22.—British Columbia.—352. Vancouver Island, south coast, Strait of Juan de Fuca, Trial Island, permanent light not yet established, temporary light described.

No. 144. Nov. 24.—British Columbia—353. Chatham sound, Prince Rupert harbor Tuck Inlet, uncharted rocks, buoys established, beacons erected, sailing directions. 354. Hectate strait, Edge passage, shallow depths in western approach. 355. Dixon entrance, West Devil rock, shoal depths in vicinity. 356. Dixon entrance, Queen Charlotte Islands, position of North Island and northwest extreme of Graham Island incorrectly shown on Admiralty chart. 357. Dixon entrance, danger southward of Cape Muzon.

No. 145. Nov. 28.—Quebec—358. River St. Lawrence, a chart numbered 8, of the River St. Lawrence at the head of Lake St. Peter between Montreal and Quebec, has been issued by the Department of Marine.

146. Nov. 29.—Ontario Lighthouse Division—359. Quebec—Ottawa River, Upper Allumette Lake, Allumette Island, light established. 360. Ottawa River, Upper Allumette Lake, Morrison or Hawley Island, light discontinued.

No. 147. Nov. 30.—Nova Scotia—362. South coast, Sambro light, lighthouse tower increased in height, light changed.

148. Dec. 4.—Ontario—365. Detroit River, Amherstburg reach, Elliott point, range lights changed in position, float lights moved.

No. 150.—Dec. 6.—British Columbia—373. Vancouver Island, southeast coast, Pachena point, temporary light.

The Stranding of the S.S. Victoria.

Capt. J. Gaudin, of the Department of Marine, assisted by Capt. J Gosse and Capt. J. G. Cox, have concluded an investigation into the circumstances attending the stranding of the C.P.R. steamer Princess Victoria on Lewis reef, Oct. 16. The important paragraphs in the judgment follow: "4. After carefully considering the evidence given before the commission, we find that after passing Cadboro Point, a proper course was shaped to pass between Lewis and Fiddle reefs. Capt. Hickey observed that the ebb tide was setting the vessel to the southward he then changed the course half a point over to the westward, from S. by W., ½W. to S. S. W. in order to counteract the influence of the tide; he also consulted the pilot, who, after observation, replied they were in the fair-way, or in a good position. When shortly afterwards Lewis reef beacon was made almost ahead, slightly on the starboard side, the engines were immediately reversed full speed, and every precaution was taken to prevent the unavoidable stranding of the vessel. This casualty must be attributed to error of judgment of the master in underestimating the set of the tide and his distance from Fiddle Reef light. Furthermore it is not in evidence that this casualty was caused by want of attention to the navigation of the ship by either the master or the chief officer; the court is therefore not warranted in recommending that the certificates of these officers be dealt with. It is recommended that owing to the large amount of traffic passing through Baynes channel, that a small light be established on Lewis reef to prevent the recurrence of such accidents as the stranding of the Princess Victoria.

Notice has been given in the House of Commons, that a resolution will be submitted at an early date urging that steps be taken to secure for Canada the cancellation of existing coasting privileges now enjoyed by foreign countries under Imperial treaties. Under the terms of such treaties a large number of Norwegian vessels are engaged in the coasting trade in Canada, particularly in the Maritime Provinces.

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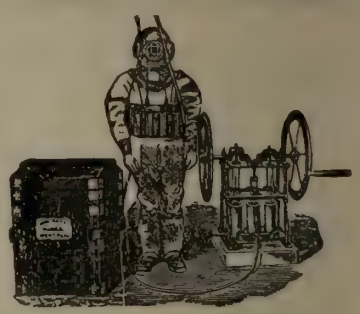

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The Kensington Stranding Case.

Commander Spain, R.N., Dominion Wreck Commissioner, assisted by Capts. W. H. Logan and J. Temple, held an investigation at Quebec, Nov. 22, into the stranding of the S.S. Kensington in the St. Lawrence River, near Matane, on Nov. 11. The following decision was rendered Dec. 10: "The Kensington was fully supplied with all the necessary aids to navigation, in the way of charts, instruments, etc. The vessel was set towards the land by the strong southeast current, which is known to nearly always exist on the Matane coast. The master of the Kensington took a four point bearing of an uncharted object on shore, the object being a prominent house; the bearings were no doubt properly taken, but, the house in question was well back from the shore, and, although the vessel was three miles distant from the object, she certainly was not anything like that distance from the shore. The court is strongly of the opinion that, had the lead been used, an excellent warning would have been given, as the soundings in this vicinity are unmistakable close in shore; the court is satisfied that the master of the Kensington gave every attention to his vessel, but he was over-anxious, and has committed a serious error in judgment; the court, however, taking into consideration Captain Morle's previous excellent record, considers that the case does not call for any interference with his certificate, but warns him to be more careful in future."

The Grounding of the S.S. Agnar.

Commander Spain, R.N., Dominion Wreck Commissioner; Capt. A. Hawkett and Pilot N. Gauthier, as assessors, held an enquiry at Montreal on Nov. 5, 1906, into the causes which led to the grounding of the S.S. Agnar on the bar at Cape Charles, St. Lawrence River, Sept. 22, 1906. The following judgment has been given: "That the S.S. Agnar, when nearing Batture du Chene gas buoy number 73Q. on her voyage to Montreal, heard one blast of a whistle from the steamship Monmouth, which vessel was approximately about 1½ miles astern; this whistle was answered by Pilot Belisle, of the Agnar, immediately, and the engines of the Agnar were put at "slow." When between Batture du Chene and Cadieux buoy another blast was blown from the Monmouth, which was also answered by the Agnar. In the opinion of the court, Pilot Belisle of the Agnar should not have answered this second whistle, for the reason that, with the strong easterly wind, and the flood tide, there was not enough distance for the Monmouth to pass the Agnar before getting to Cape Charles, and Pilot Belisle, being in the leading ship, should have been aware of this fact. It is also apparent that Pilot LaBranch, in the S.S. Monmouth, who was keeping his vessel full speed ahead, should have been able to judge, by the way he was overtaking the Agnar, that it would be impossible for him to pass before getting to Cape Charles. A third blast of the whistle was given from the Monmouth, which was not answered by the Agnar, and, after giving this blast, Pilot LaBranch ordered the engines of the Monmouth full speed astern, but, finding that his vessel was canting towards the north bank, he was obliged to go ahead again, which necessitated his passing the Agnar in the narrow channel, which no doubt caused the Agnar to ground. In the opinion of the court, both pilots were deceived by the strong east wind, and the flood tide, and both Pilot F. LaBranch and Pilot Arthur Belisle are hereby censured and warned to be more careful in the future."

The Burroughs-Bielman Collision.

The Supreme Court at Ottawa decided the case of the Bielman vs. Caldwell, recently, the Chief Justice delivering the judgment as follows: "This is a case of damage promoted by the owners of the ship G. T. Burroughs against the owners of the ship C. F. Bielman, both foreign ships registered in U.S. ports. By the pleadings and findings of fact, it appears: On May 31, 1905, at about 12.45 a.m., a collision took place between the Burroughs and the Bielman, in the St. Clair River, just below the southeast bend. The Burroughs was a steamer 109 ft. long, 27 ft. beam and 9 ft. draught, and the Bielman 305 ft. long, 42 ft. beam and 18 ft. draught. The weather was clear, the wind light from the southwest. Both vessels were proceeding down the river on the same course, fully laden, the Bielman having the barge McLaughlin in tow. The navigable channel of the river, where the collision occurred, is about 700 ft. wide, very winding, and is referred to in the evidence as dangerous. One of the witnesses describes it as 'collision bend, because accidents happen there.' There were several vessels in the locality at the time of the collision. Under these circumstances the Bielman, going at the rate of about nine miles, attempted to overtake and pass the Burroughs on the latter's port side. It is unnecessary to refer to the well-known rules which require caution as to speed in a dangerous and crowded channel, and put upon the overtaking and pursuing vessel the obligation to keep out of the way of the overtaken vessel, which latter has the right-of-way, her only duty being to hold her course. It is sufficient to say that, as the boats were abreast, the bow of the Bielman, apparently being somewhat ahead and at a distance apart of not less than 250 ft., which is the extreme limit fixed by any of the witnesses, a collision occurred; the bow of the Burroughs swung towards the Bielman and struck her amidships; as a result of the blow, the Burroughs sank. It is argued by the appellant that the Burroughs was not properly manned and that proper steps were not taken by those on board of that steamer at the critical moment to guard against an accident. Even if it be admitted that, on the whole, the evidence of both sides is, on some points, conflicting and nicely balanced, I am of opinion that the court below was properly guided by the probabilities of the respective cases which are set out, and the balance of probability favors the theory adopted by the trial judge that the collision was the result of the suction produced by the passage through the water of a relatively large vessel, such as the Bielman overtaking a smaller vessel in close proximity and at a rate of speed which, under the circumstances, was too great and which suction caused the Burroughs to sheer over to port and collide with the Bielman. The appeal should be dismissed with costs."

Transfer of Halifax Dockyard, &c.

The Dominion Government notified the representatives of the Imperial Government at the Halifax dockyard that it would be prepared to take over the property Jan. 1. The property covers 40 acres of land along the water front, and is valued at about $3,000,000. It comprises a navy yard, victualling yard, naval barracks, naval hospital and grounds, burial ground, Admiralty house and grounds, recreation grounds, and a dozen wharves. The condition imposed by the Imperial Government and accepted by the Dominion Government in connection with the transfer are: (1) The care and maintenance of the buildings, plant and machinery to be undertaken by the Dominion Government and to be regulated by similar instructions to those in force at the time of the closing of the yards. (2) The yards to be open to inspection by the Commanders-in-Chief of the North American, West Indies and particular service squadrons when desired. (3) The yards to be available for the repair of his Majesty's ships at any time so far as their facilities admit. (4) The places where the navy coal has been hitherto stored to be kept free for such stocks as may be required from time to time for his Majesty's navy; access to the wharves to be available and the use of all appliances for coaling his Majesty's ships to be permitted. (5) The Admiralty to have power to take over the full management and charge of the establishment in the event of war or any other emergency, of which the Admiralty shall be the sole judges. (6) The right for the Admiralty to revert into permanent occupation of the establishments whenever they consider that the interests of the navy render such course necessary, without incurring any liability towards the Dominion Government. (7) The Dominion to undertake all existing liabilities to which the establishments are subject for such time as they may be in the occupation of the Dominion.

Sault Ste. Marie Canals Traffic

The following commerce passed through the Sault Ste. Marie canals in Nov., 1906:

ARTICLES			CANADIAN CANAL	U.S. CANAL	TOTAL
Copper	Eastbound	Net tons	1,151	10,995	12,146
Grain	"	Bushels	3,268,801	4,929,611	8,198,412
Building stone	"	Net tons	....	....	....
Flour	"	Barrels	367,062	654,950	1,022,012
Iron ore	"	Net tons	502,882	2,953,171	3,456,053
Iron, pig	"	Net tons	....	1,865	1,865
Lumber	"	M.ft.B.M.	7,592	93,795	101,387
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	6,640,324	11,174,650	17,814,974
General merchandise	"	Net tons	3,643	5,682	9,325
Passengers	"	Number	533	95	628
Coal, hard	Westbound	Net tons	19,500	143,275	162,775
Coal, soft	"	Net tons	157,307	769,581	926,988
Flour	"	Barrels	1,332	....	1,332
Grain	"	Bushels	....	....	....
Manufactured iron	"	Net tons	15,441	46,505	61,946
Salt	"	Barrels	4,000	48,014	46,014
General merchandise	"	Net tons	71,954	63,901	135,855
Passengers	"	Number	311	63	374
Freight: Eastbound		Net tons	834,354	3,658,379	4,492,733
Westbound		Net tons	264,922	1,029,665	1,294,587
Total freight		Net tons	1,099,276	4,688,044	5,787,320
Vessel passages		Number	644	1,606	2,250
Registered tonnage		Net tons	946,287	3,670,939	4,617,226

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The New Steamship Dundee.

The str. Dundee, the latest addition to the fleet of vessels managed by R. O. and A. B. Mackay, Hamilton, Ont., sailed from the builder's yards, Dundee, Scotland, Nov. 4, and put into St. John's, Nfld., Nov. 16, with her steering gear disabled, and otherwise damaged. She experienced very heavy weather, and during the storm one of the engineers was badly crushed in the machinery and one of the seamen had his leg broken. The injured men were removed to the hospital at St. John's for treatment, and the steamer was repaired before leaving for Hamilton, which was reached Dec. 3. The Dundee has been built to the highest class British Corporation Registry and is specially designed for the grain and package freight business. The steering gear is placed aft under the spar deck, and is of an elaborate description, combining both hand and steam gears; in the after part of the boat there is a steam capstan, while two steam winches are fitted convenient to the cargo hatches. A large wire warping winch is placed amidships for rapid mooring, etc., and steam windlass and capstan on the forecastle head. The other arrangements for towing are of the most complete description. Forward in the large deckhouse, elaborately furnished, are the captain's and owners' rooms, with all conveniences. The officers' quarters are also placed forward under the forecastle deck, while the engineers are accommodated on the spar deck aft; also a large dining saloon. The crew's quarters are immediately under on the main deck. Her dimensions are: Length, 257 ft. over all; breadth, 43 ft. 3 in., with a depth of, to spar deck, 26 ft. 6 in.; her gross tonnage being 2,300 tons. The engines are placed aft. They are of the triple-expansion type, with cylinders 20, 33 and 54 in. in diameter, with a stroke of 36 in. Steam is supplied by two large boilers working at a pressure of 180 lbs. per square inch. This is the fourth vessel built by The Caldon Shipbuilding and Engineering Co. for the Canadian lake trade.

The Lake Freight Situation.

Our Winnipeg correspondent wrote as follows Dec. 15: "The lake season just closed has been a very disappointing one from the standpoint of both owners and shippers, as after the magnificent growing weather all season and the equally fine weather during threshing operations, the car shortage in the west prevented a free movement of the grain, and the effect of this was to keep the price of wheat too high for an active demand for our wheat from exporters, and this in turn had the effect of knocking the bottom out of lake freight rates, they having gone as low as 1½c. per bushel during the last week of Nov., against 4½ to 5c. for the same time last season, and of course this rate for such a late date hardly paid the expense of handling the business owing to the increase in all operating expenses aboard ship in the late fall.

"The car shortage in the west was caused by the extraordinary amount of westbound package freight being handled by the railways, and also somewhat to the failure of coal dealers throughout the west to get in their supplies during the early summer, and the consequent demand for cars for this traffic during the wheat shipping season. Contrary to general expectation, there was no car shortage to speak of at eastern lake terminals, as owing to the slowness in movement in the west the grain did not move over the lakes fast enough to bother the eastern terminals to any extent; in addition to this, there were two new eastern terminal elevators ready before the close of navigation, one at Tiffin and the other at Goderich, which also perhaps had something to do with the fact that there was no blockade east of the lakes. From a weather standpoint, conditions might have been considerably better, for although the season opened early, navigation was delayed to a great extent all season by fogs and later on by rather severe gales, and early in October by snow storms, and to top off, serious delays were encountered by ice obstructions in the St. Mary's River which lost a number of boats a trip. The severe weather was responsible for the loss of a number of Canadian vessels, among which might be mentioned the Theano, Golspie and Monarch, all being lost through severe weather, and a number of others being lost by collision.

"The total movement of wheat from the Canadian head of the lakes will probably fall fully six million bushels short of the previous season, but the interior is still full of grain of all kinds and the business will simply be moved at the beginning of next season, but of course the lake rates are never as attractive in the spring as in the fall, for the reason that shippers are able to move the business at their own convenience in the spring, whereas the fall movement is of the rush order usually, and shippers have to take what they can get and be thankful.

"Coal was very active at the close of navigation, one cargo of about 8,000 tons having been loaded from Erie for Fort William at $1 a ton, which is 60 to 65c. higher than the usual summer or season rate on this commodity, and from present indications, there will be a decided shortage of soft coal at the Canadian head of the lakes before the opening of another lake season, and no doubt considerable coal will have to be moved during the winter via the all rail route."

The Ottawan-Maude Collision.

Commander Spain, R.N., Dominion Wreck Commissioner, with Capt. A. Reid, Port Warden of Montreal, and E. Adams, Chairman of the Board of Steamboat Inspection, as assessors, held an inquiry at Montreal on Oct. 3, 1906, into this collision, which occurred in the Lake of Two Mountains, Ottawa River, Que., Sept. 27. The following judgment has been given, prefaced with the remark that the evidence was of a most contradictory character: "The steamer Maude was sunk by the steamer Ottawan at about 1.30 a.m., owing to a collision between the two vessels, whereby three lives were lost. The night was fine, dark but clear; the lights of both vessels were distinctly visible at some distance. Both ships were on the wrong side of the fairway, the Maude on the north side of the channel, and the Ottawan on the south. W. Gerard, mate of the Maude, states that he saw the masthead and starboard lights of the approaching Ottawan to the right or south of the Maude, distant about one mile. The master of the Maude at this time was asleep in the pilot house; the mate, apparently apprehending no danger from the approaching vessel, did not call the master, but continued on his course, expecting, as he states, that both vessels by keeping their respective courses would pass green to green. Shortly afterwards he heard one blast from the approaching steamer Ottawan, the sound of which aroused the master, who immediately committed the very grave error of giving two blasts of his whistle, thereby infringing the rules of the road by what is termed 'cross signals.' The rule reads as follows: 'Vessels approaching each other from opposite directions are forbidden to use what has become known among pilots as cross signals, that is, answering one whistle with two, and answering two whistles with one.' The mate of the Maude at the same time starboarded his helm, and almost immediately the collision took place. The mate was the navigating officer in charge of the vessel; he was at the wheel himself and, in the opinion of the court, was grossly culpable for not acting more promptly in taking steps to avoid the collision. When he saw both lights of the approaching vessel so close, he might have stopped his ship, given three blasts of his whistle and gone full speed astern; had he acted in this way the probabilities are that the collision would not have occurred, or if it had, the results would not have been so disastrous. The steamer Maude, when inspected by the court two days after the disaster, was resting on the bottom with her upper works more or less washed away, and Point du Lac lighthouse bearing nearly right ahead. The court considers that when the Ottawan collided with the Maude her stem cut into the latter vessel some 5 ft., and there is no doubt that in going full speed astern to back out, the bow of the Ottawan became entangled in the wreckage, and drew the Maude into the position in which she now lies. The court considers the disaster was due to the wrongful acts of the master and the mate of the Maude, and therefore suspends the certificate held by Capt. E. Gauthier as master of a passenger steamer between Ottawa and Montreal, for 12 months from the date of the disaster; also suspends the certificate held by Mate W. Gerard, as mate of a passenger steamer, minor waters, for 18 months from the date of the disaster. It is very evident that on board both vessels very indifferent lookouts were kept, and poor judgment shown in determining their distance apart. However, the Ottawan carried out the rules of the road, whereas the Maude did not.

A clause has been incorporated in the Merchants' Shipping Act, by the Imperial Parliament, making it an offence punishable by a fine not exceeding £50, or imprisonment for three months, to induce or attempt to induce any person to emigrate or engage steerage passage in any ship by means of any false pretence. The clause was introduced into the act upon representations made by the Dominion Government.

Lloyd's register of shipping for the year ended June 30, 1906, shows 662 new vessels of 1,412,645 tons were classed, of which 652 vessels of 1,408,579 tons were steamers, and 10 vessels of 4,066 tons were sailing ships. Of the total tonnage, 24.4% was built for foreign and colonial owners. There were 39 steamers of over 5,000 tons each classed during the year. As compared with the returns for 1904-05, there was an increase of 218,810 tons in the steamships built, and a decrease of 6,992 tons in the sailing vessels built.

A report of the International Waterways Commission deals with the proposal to divert certain waters from the Birch Lake drainage basin in Lake and Louise counties, Minn. It was shown, on behalf of Fort Frances, Ont., the Koochiching Power Co., the Rainy River Improvement and Navigation Co., and the company which has an Ontario charter to develop a water power at Fort Frances, and the City of Winnipeg, that the level of the waters of Rainy River would be materially affected if the project was approved of. The Commissioners report against the proposal and suggest the adoption of a treaty between the United States and Canada to settle the principles to govern the diversion of international waterways, but recommend that high waters be used freely by either side for navigation purposes, domestic and sanitary purposes, and for locks used for purposes of navigation.

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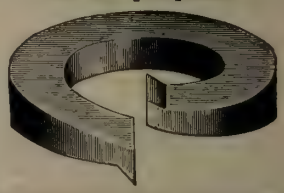

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LIST OF STEAM VESSELS REGISTERED IN CANADA FROM NOV. 15 TO DEC. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
A. F. Bowman	116,385	Collingwood, Ont., 1906....	Screw 32 N.H.P.....	76.0	22.0	12.0	113	77	Port Arthur, Ont....	The Great Lakes Dredging Co., Pt. Arthur
Arrow.....	122,160	Vancouver, B.C., 1906.....	" ½ "	15.5	5.0	2.0	1	1	Vancouver, B.C.....	W. H. Archer, Vancouver, B.C.
Asahe.....	122,155	" " "	" 1 "	32.4	10.3	4.0	12	8	" "	Takido Nakatu, Vancouver, B.C.
Cariad.....	122,159	" " "	" 1 "	22.5	7.0	3.0	3	2	" "	H. C. Layard, Vesuvius Bay, B.C.
Dundee.....	122,208	Dundee, Scotland, 1906....	" 146 "	250.0	43.2	23.5	2278	1431	Hamilton, Ont.....	Dundee Steamship Co., Hamilton, Ont.
Ed. Fiske....	116,389	Buffalo, N.Y., 1883.....	" 10 "	66.0	16.0	9.0	69	47	Port Arthur, Ont....	Can. Towing & Wrecking Co., Pt. Arthur
Eliza Williams	116,388	" " 1872.....	" 10 "	62.0	14.0	7.5	50	34	" " "	" " " "
Fleetwing....	121,961	Gananoque, Ont., 1905....	" 1 "	30.6	9.8	2.4	7	5	Kingston, Ont.....	W. McMaster, Amherst Island, Ont.
Humber.....	121,965	" " 1906....	" 4 "	26.0	5.7	2.3	2	1	" "	C. T. Munroe, Gananoque, Ont.
J.W.Wetherbe	122,251	Philadelphia, Pa., 1872....	" 49 "	111.2	22.0	9.8	165	82	Quebec, Que.....	B. J. Kaine, St. Alp. de Chicoutimi, Que.
Manetto.....	121,940	Dartmouth, N.S., 1906....	" 4 "	37.5	16.7	7.0	29	21	Halifax, N.S.....	Auxiliary Fishing Co., Halifax, N.S.
Peace River..	121,777	Ft. Vermillion, Alta., 1906.	Paddle 6 "	110.0	24.0	4.5	272	185	Winnipeg, Man.....	Hudson's Bay Co., London, Eng.
Progressive...	122,158	Vancouver, B.C., 1906.....	Screw 16 "	77.6	18.0	8.8	88	60	Vancouver, B.C.....	Prog. Steamboat Co., Vancouver, B.C.
Rambler.....	122,157	" " "	" 4 "	40.6	7.6	4.0	11	7	" "	J. L. Wilson, Vancouver, B.C.
Siesta.....	107,068	Bristol, R.I., 1882.....	" 14½ "	98.6	17.0	9.0	99	67	Sault Ste. Marie, Ont.	F. W. Waldie, Toronto.
Shawatlasu...	122,156	Vancouver, B.C., 1906.....	" 3 "	35.7	9.0	3.9	12	8	Vancouver, B.C.....	G. T. Pacific Ry., Montreal.
The Inn.....	121,966	Gananoque, Ont., 1905....	" 1 "	25.0	5.6	2.2	2	1	Kingston, Ont.....	F. J. Henderson, Gananoque, Ont.
Wanneta.....	111,889	Lakefield, Ont., 1906.....	" ½ "	25.2	5.2	2.5	2	2	Peterborough, Ont...	T. and W. Gordon, Lakefield, Ont.
349.....	121,962	Kingston, Ont., 1906.....	" 3 "	34.0	6.0	3.0	4	3	Kingston, Ont.....	J. H. Davis, Kingston, Ont.
350.....	121,963	" " "	" 3 "	34.0	6.0	3.0	4	3	" "	" " "
351.....	121,964	" " "	" 3 "	34.0	6.0	3.0	4	3	" "	" " " "

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM NOV. 15 TO DEC. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Dor'thy M Porter	117,164	Falmouth, N.S., 1906.....	Schr.	98.0	26.7	10.6	186	168	Windson, N.S.....	L. D. Shafner, Bridgetown, N.S.
Empire.....	116,390	Collingwood, Ont., 1906....	Barge	160.0	40.0	12.0	768	768	Port Arthur, Ont..	Can. Towing and Wrecking Co., Pt. Arthur.
Frank.....	122,081	Souris, P.E.I., 1906.....	Schr.	34.8	10.7	5.0	10	10	Charlottetown, PEI	J. M. Chevrie, Souris, P.E.I.
Freedom.....	122,006	Liverpool, N.S., 1906.....	"	112.9	28.6	10.9	237	197	Lunenburg, N.S....	D. Ritcey, Riverport, N.S.
Georgina Roop..	112,004	Granville, N.S., 1906	"	159.0	35.3	12.0	490	424	Annapolis, N.S.....	Pickles & Mills, Annapolis Royal, N.S.
J.E.W.H.....	121,930	Bic, Que,. 1906.....	"	76.8	24.0	6.9	73	73	Quebec, Que.....	Mrs. E. Heppell, Bic, Que.
Lala.....	121,929	Quebec, Que., 1904.....	"	67.2	21.0	5.5	45	45	" "	Jas. Richardson Co., Matane, Que.
Margaret Leon'd	122,241	Boston, Mass., 1870.....	"	58.0	17.4	6.8	37	37	St. Andrews, N.B..	S. Brown, Campobello, N.B.
M.C.A.....	116,310	Souris, P.E.I., 1906.....	"	73.4	22.7	7.4	77	77	Charlottet'n, P.E.I.	C. Arseneau, Magdalen Island, Que.
Montrose.....	121,897	Shelburne, N.S., 1906.....	"	113.0	30.0	11.3	238	198	Shelburne, N.S.,...	J. L. Porter, St. Vincent, B.W.I.
Muriel M.Young.	122,007	Liverpool, N.S., 1906.....	"	103.8	26.1	10.2	121	100	Lunenburg, N.S....	J. B. Young, Lunenburg, N.S.
Nicola.....	122,008	Lunenburg, N.S., 1906.....	"	99.8	25.7	10.2	129	99	" "	E. Zinck, Lunenburg, N.S.
Sea View.....	122,082	Sea View, P.E.I., 1906.....	"	37.4	13.7	5.5	13	13	Charlottet'n, P.E.I.	S. Packering, Sea View, P.E.I.
Water Witch...	122,023	Liverpool, N.S., 1906.....	"	114.3	28.9	11.4	220	190	Liverpool, N.S.....	J. G. Porter, St. Vincent, B.W.I.

Reciprocal Tonnage Exemptions.

At the annual meeting of the Passenger Steamboat Lines of the U.S., held at New York Nov. 22, F. King, of Kingston, Ont., Secretary of the Dominion Marine Association, who is an honorary member of the passenger lines organization, presented a strong argument, of which the following is a summary: The U.S. Department of Commerce and Labor has recommended, and the U.S. Senate at its last session adopted a bill no. 8, 4885, repealing what are called the reciprocal exemption privileges provided in the tonnage tax statute of 1884, as amended in 1886. That statute imposes a duty of 3c. a ton (not to exceed 15c. in any year) at each entry on all vessels entered in any U.S. port from any foreign port or place in North America or in certain other countries; and it provides for the suspension of the collection of so much of this duty on vessels from any foreign port as may be in excess of the tonnage and lighthouse dues or other equivalent taxes imposed in said port on U.S. vessels. Since 1885, vessels from Ontario have enjoyed exemption from this tonnage tax because U.S. vessels are exempt in Ontario ports. Quebec Province has been entitled to exemption to the extent of the difference between the 6c. hospital tax charged there and the tonnage tax in question, but has not yet enjoyed this exemption. If it is granted it will assist materially in procuring the abolition of the obnoxious hospital tax in Quebec. At various dates, exemption has also been granted to vessels of certain foreign countries where U.S. vessels enter free. The argument advanced for the repeal of these reciprocal exemptions appears to be that certain foreign countries entering vessels in U.S. ports enjoy greater advantages than the U.S. under the reciprocal exemption privileges, because the foreign tonnage entering the U.S. from these countries so greatly exceeds the U.S. tonnage entered in the foreign ports. Entries between U.S. ports and ports in the Netherlands are cited as examples; and it is also urged that Great Britain is likely to repeal its light dues in the near future and thus incidentally become entitled to ask exemption from the U.S. tax for British tonnage entering U.S. ports. Whatever forcé this argument may have in the cases cited, it is submitted that it cannot apply on the Great Lakes and the St. Lawrence, where the U.S. tonnage occupies such an important relative position. The repealing bill would swell the U.S. tonnage tax receipts at the expense of vessels from Ontario, and would prevent other Canadian provinces from enjoying that measure of exemption to which they are entitled; yet at the same time the enactment of the bill would be a direct invitation to Canada to pass similar legislation and the result would be the imposition of a most undesirable burden upon U.S. tonnage trading to Canadian ports on the International waterway. The bill did not pass the House of Representatives on account of representations made in time, including representations made from Ottawa to Washington at the instance of the Dominion Marine Association. It is presumed, however, that it is to come up again at the coming session of Congress, and the Dominion Marine Association asks the assistance of the Association of Passenger Steamboat Lines of the U.S., and of the Lake Carriers' Association in preventing its passage or, at least, in having the Great Lakes and St. Lawrence exempted from its provisions. Such action would benefit all vessel owners equally and be in accord with the recent reciprocal abolition of the annual inspection fees, and the still more recent reciprocal arrangements in regard to inspection itself, in both of which matters the Dominion Marine Association was an active agent.

The Passenger Steamboat Lines representatives received Mr. King very cordially and passed a strong resolution opposing the bill, and urging that at least the Great Lakes and the St. Lawrence should be exempted from its operation. A committee, consisting of G. A. White, Hudson River Day Line; B. W. Parker, White Star Line, Detroit, Mich.; A. A. Shantz, of the Detroit and Cleveland, and Detroit and Buffalo lines; H. Goulder, of Cleveland, Ohio, couusel of the Association; and F. King, were appointed to take further action in the matter before Congress if necessary. The facts have been laid before the President of the Lake Carriers' Association by the committee and it is expected that Association will join in opposing the bill.

The obnoxious hospital tax charged in Quebec Province came up incidentally for discussion, it being felt that the reservation of the Great Lakes and the St. Lawrence from the present repealing bill would materially assist in the abolition of that tax, while if the bill went through Congress as it stands, it might be just that much more difficult to abolish the hospital tax.

A deputation of four, including Mr. King, had an interview with the new U.S. Secretary of Commerce and Labor in New York and discussed the objects and aims of the Association, also urging the objections to the bill.

Most cordial expressions of good will were made by members of the Passenger Steamboat Lines towards the Dominion Marine Association, and there is no doubt that in matters of common interest a combination of forces can be brought about at any time.

The New York meeting was also attended by B. W. Folger, Manager Niagara Navigation Co.; W. Campbell, Manager Detroit, Belle Isle and Windsor Ferry Co., and C. J. Smith, General Manager Richelieu and Ontario Navigation Co., the latter being elected a member of the executive committee.

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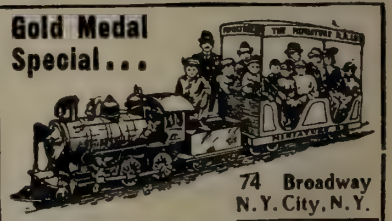

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The Dominion Ex. Co. has opened a route on the C.P.R. between Bolton and Craighurst, Ont., on the Toronto-Sudbury line.

The Dominion Ex. Co. is to be provided with additional accommodation at the Union Station, St. John, N.B., by the abolition of the cells there.

The Dominion Ex. Co. has opened offices at Alliston, Baxter, Beeton, Craighurst, Midhurst, Palgrave, Tottenham, Utopia, Ont.; and Wawota, Sask.

J. Haycock has been appointed agent of the Dominion Ex. Co. at St. John, N.B., succeeding E. N. Abbott, transferred to the company's Montreal office.

One of the features of the shortage of cars in the Canadian Northwest has been the demands made upon collieries and coal dealers at various points to ship sacks of coal by express.

W. S. Stout, Toronto, General Manager Western Ex. Co., has issued a general circular to agents, calling attention to a number of matters affecting the carrriage of express parcels.

The Canadian Ex. Co. has opened offices at Bonaventure, Caplin, Carleton, Cascapedia, Charlemagne, Maria, New Carlisle, New Richmond, Oak Bay, Que.; Point du Chene, N.B.

The annual meeting of the Canadian Ex. Co. was held in the G.T.R. offices, Montreal, Dec. 14, when the retiring directors were re-elected. The retiring officers were subsequently re-elected by the directors.

The attention of express agents is called to the similarity of Yamachiche, Portneuf County, Que., an office of the Dominion Ex. Co., and Tewachiche, a station on the Great Northern Ry. of Canada (Canadian Northern Quebec Ry.).

The United States courts at Sioux Falls, S.D., has decided, in a test case taken by the U.S. Ex. Co., that express companies doing business in the State are common carriers, and subject to the orders of the South Dakota Railroad Commission.

The Dominion Ex. Co. has extended its route on the Guelph and Goderich Ry. from Elmira to Milverton, Ont.; on the C P R. Lauder extension from Lauder to Broomhill, Man.; and on the C.P.R. extension between Preston, Man., and Kaiser, Sask.

The Canadian Ex. Co. has re-opened the following offices on the Intercolonial Ry., which were included in the list of offices temporarily closed in circular No. 40, Oct. 10: Jacquet River, N.B.; Belmont, East Mines, Harbour au Bouche, McIntyres Lake, Ocford Jct., Thomson, Wentworth, N.S.

The Dominion Ex. Co. has opened offices at Baker, Bardal, Broomhill, Ebor, Man.; Fasset, Maryland, Mount Johnson (formerly St. Gregorie, Iberville county), Que.; Belbeck, Bender, Drinkwater, Fairlight, Kennedy, Sask.; Earlton, Englehart, Heaslip, Linwood, Millbank, Milverton, Thornloe, Uno Park, Ont.

The Dominion Ex. Co.'s officials in Montreal stated recently that the demand for money orders to Great Britain was largely in excess of former years at the Christmas season. A good deal of the increased business is due to the large number of immigrants who are sending money to their friends in the old country.

J. S. Patch, who had been General Agent of the Canadian Ex. Co. at Montreal since 1893, died there Dec. 5, aged 67. He came to Canada after the U.S. Civil War and entered the Canadian Ex. Co.'s service, acting for many years as agent at Kingston, Ont., before being moved to Montreal. At the latter place he was also general agent for the American and National Express companies.

The station agents and telegraphers on the Intercolonial Ry. and the Prince Edward Island Ry., who struck against the refusal of the Canadian Ex. Co. to grant them increased remuneration in April, 1906, have settled their differences and work was resumed in Dec. It is said that agents are to receive a regular payment of $2 a month, and a commission of 5% upon all business done.

Replying to a question in the House of Commons recently, the Premier stated that the contract between the Canadian Ex. Co. and the Intercolonial Ry. was still in force. The company, so far as its rates and regulations were concerned, came under the control of the Board of Railway Commissioners. The Government was not aware that there had been any discrimination by the company in connection with its service over the I.C.R.; there had been some irritation owing to a strike, but that had been settled.

The Canadian Northern Ex. Co. is operat ing over the Canadian Northern Ontario Ry. between Toronto and Parry Sound, Ont. It has offices at Beaverton, Brechin, Footes Bay, Mount Albert, Parry Sound and Washago, Ont Express matter for Bala Park, Blackstone, Cedardale, Dudley, Duncan, Falding, Gamebridge, Gormley, Lake Joseph, Monk Road, Pefferlaw, Pine Orchard, Richmond Hill, Southwood, Sparrow Lake, Thornhill, Torrance, Vandorf, and Zephyr, must be prepaid and released, and will be put off train at destination at owner's risk, whether there is anyone there to receive them or not.

Press despatches from Ottawa stated, recently, that the Post Office Department is about to take up the business of handling express matter. Replying to a question in the House of Commons the Postmaster-General stated that an arrangement was under consideration for the transmission and delivery of parcels by post c.o.d. It was contemplated that the post office should be the means by which parcels should be despatched, and the collection of any charges thereon made by the department on a definite scale. Details had not been perfected, but were being considered by the department. Full information would be given to Parliament when the project had been completed.

Telegraph and Cable Matters.

The C.P.R Telegraph Department has opened offices at Millbank, Milverton, Elmira, Cliffe, Linwood, and Weissenburg, Ont.

The Marconi Wireless telegraph apparatus is to be installed on the steamers of the Dominion Line. The first two vessels to be fitted will be the Canada and Dominion.

Jno. Fothergill, formerly of the Western Union Telegraph Co.'s cable office at Canso, N.S., has been appointed to the San Francisco office of the Commercial Pacific Cable Co.

During the year ended June 30, 1906, the earnings of the Dominion Government telegraph line to Dawson, Yukon, were $115,876. The cost of management and operation was $229,351.

W. F. Maclean, M.P., has introduced a bill into the House of Commons to amend the Railway Act, 1903, so as to bring telegraph companies under the jurisdiction of the Board of Railway Commissioners.

The Commercial Cable Co.'s str. Mackay-Bennett recently returned to Halifax, N.S., after a lengthened repairing trip, during which she picked up and repaired the deep sea cable between Flemish Cape and the Grand Banks.

F. R. Carney, formerly local manager of the G.N.W. Telegraph Co., Montreal, has been appointed manager of the Western Union Telegraph Co.'s office at 255 Church St., New York city, succeeding J. Simmonds, appointed Inspector of offices north of 42nd Street in that city.

Local reports state that the C.P.R. and the G.N.W. Telegraph Co. have offered to purchase the telegraph line operated by the Temiskaming and Northern Ontario Ry. Commission at a valuation. It is also said that the Commissioners have declined to consider any offer for the purchase of the line.

The officials of the Old Time Telegraphers' and Historical Association for the current year are: President, H. D. Reynolds, Buffalo, N.Y.; Vice-President, G. A. Burnett; Executive Committee: J. W. Tillinghurst, Grand Island, N.Y.; N. Hucker, L. M. Moore, Buffalo, N.Y.; E. W. Collins, Cleveland, Ohio; H. J. Kinnucan, Detroit, Mich. These with I. McMichael, Toronto, and G. S. Macdonald, will have charge of the arrangements for the annual meeting and reunion at Niagara Falls, N.Y., during the summer. The date of this gathering has not yet been fixed

A. White, President of the De Forest Wireless Telegraph Co., is quoted as saying that a company is about to be formed to be called the United Wireless Telegraph Co., which will take over the Marconi Wireless Telegraph Co. of England (which controls the Marconi companies of the U.S., Canada and European countries), and the American De Forest Wireless Telegraph Co., which controls the De Forest subsidiary companies. The story is categorically denied by officials of the U.S. Marconi, Wireless Telegraph Co., and an action has been commenced in the Maine courts to have A. White restrained from transferring, or in any way dealing with the De Forest patents.

The shareholders of the Dominion De Forest Wireless Telegraph Co. are being asked to exchange their shares for stock in the Northern Commercial Telegraph Co., which has acquired 200,000 shares, the controlling interest in the D. DeF. W. T. Co. The Northern Commercial Telegraph Co. was originally incorporated by the Dominion Parliament in 1898, to construct telegraph lines to the Yukon Territory and points in B.C., and obtained additional powers in 1899. At the first session of the Dominion Parliament of 1906, an additional act was obtained increasing the capital stock to £750,000, repealing sec. 8 of the act of 1898, and substituting another therefor, so as to enable it to construct, maintain and operate lines of electric telegraph and telephones by means of cables through the waters on the west coast of British Columbia, or elsewhere in Canada, and the necessary land connection at each end of such cables, and land lines, or by continuous land lines; and in, under, upon and across any water, or along and across any highway, provided that such lines shall not interfere with the use of such highways, or interrupt the navigation of navigable waters. It is also provided that the company shall not have the right to build a bridge over any navigable waters.

General Telephone Matters.

A local telephone line has been opened at Fielding, Sask.

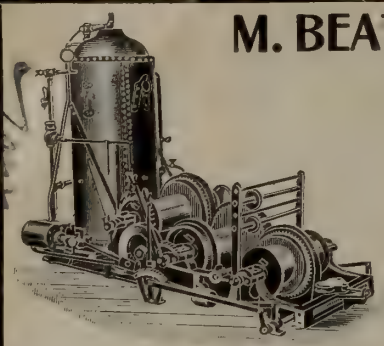
W. Hay, London, Ont., has been appointed local manager of the Bell Telephone Co. at Ingersoll, Ont.

F. O. Burbide, Bell Telephone Co.'s inspector at Coaticook, Que., has been transferred to Calgary, Alta.

Returns from Manitoba up to Dec. 24, show that the telephone by-law was defeated in 71 municipalities and carried in 51.

There is a long distance telephone system in operation between Port Arthur, Ont., and Hymers, Ont. The line has just been put into thorough repair.

G. B. Baker, who has resigned his position as local superintendent Eastern Tele-



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DERRICKS

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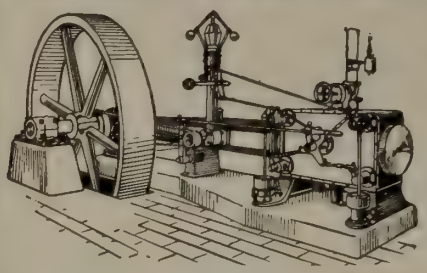
MACHINERY

Hoisting Engines, Centrifugal Pumps for Water and Sand, Stone Derricks, Clam-Shell Buckets, Steel Skips, Coal and Concrete Tubs and other Contractors' Machinery.

LEONARD CORLISS ENGINES



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London, Ont.

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MARINE Lamps, Search Lights and Supplies.
ELECTRIC Reflectors for Store Lighting.

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REQUIRES NO FORGING. A SAVING OF 35% to 45%.

WILLIAM ABBOTT, 334 St. James St., **MONTREAL**

A Personal Appeal

The Hospital for Sick Children, College street, Toronto, appeals to fathers and mothers of Ontario for funds to maintain the thousand sick children that it nurses within its walls every year.

"HAPPY WITH HER DOLL."

The Hospital is not a local institution—but Provincial. The sick child from any place in Ontario who can't afford to pay has the same privileges as the child living in Toronto and is treated free.

The Hospital had last year in its beds and cots 853 patients—331 of these were from 231 places outside of Toronto. The cost is 1.37 cts. per patient per day, and there were 138 sick little ones a day in the Hospital.

"NEW PICTURE BOOKS, JUST ARRIVED."

Since its foundation the Hospital has treated 12,120 children. About 8,500 of these were unable to pay and were treated free.

SERVING BREAKFAST.

Your money can put golden hinges on the door of the Hospital's mercy.

Everybody's dollar may be the Friend in Need to Somebody's child.

Your dollar may be a door of hope to somebody's child. The Hospital pays out dividends of health and happiness to suffering childhood on every dollar that is paid by friends of little children.

TWO CLUB FOOT CASES IN PLASTER

If you know of any child in your neighborhood who is sick or crippled or has club feet send the parent's name to the Hospital.

See what can be done for club-foot children. There were 36 like cases last year and hundreds in 31 years.

BEFORE AFTER

Please send contributions to J. Ross Robertson, Chairman, or to Douglas Davidson, Sec.-Treas., of the Hospital for Sick Children, College Street, Toronto.

phone Co., Sydney, N.S., was presented with a dress suit case by the staff, Dec. 13.

The arrangements in connection with the amalgamation of the New Brunswick Telephone Co., and the Central Telephone Co., are practically completed and it is expected that the new charter will be obtained from the Provincial Government early in the month.

In connection with the plebiscite recently taken in Manitoba upon the proposal to establish municipal telephone lines with Government long distance connections, the Bell Telephone Co. has issued a map showing its long distance lines, local exchanges and rural lines within the Province.

The Premier of Manitoba, in an interview Dec. 16, stated that the Government had instructed the Public Works Department to ask for tenders for poles, wire, cross arms, and insulators, etc., so that construction of a Provincial telephone system could be started as soon as the frost was out of the

The Purchasing Agents' Guide

To the Manufacturers of & Dealers in Steam & Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' Supplies, &c.

Accident Insurance
Accident & Guarantee Co. of Canada....Montreal.
Canadian Ry. Accident Ins. Co.....Ottawa, Ont.

Aerated Waters
E. L. Drewry.....Winnipeg.

Air Brakes and Fittings
Canada Foundry Co.....Toronto.
Canadian Westinghouse Co.....Hamilton, Ont.

Air Compressors
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.

Ales
E. L. Drewry.....Winnipeg.

Axes
James Smart Mfg. Co.....Brockville, Ont.

Axe Steel
Montreal Steel Works.....Montreal.

Axles
James Hutton & Co.....Montreal.
Nova Scotia Steel & Coal Co...New Glasgow, N.S.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.

Badges
R. Woodman Mfg. & Supply Co....Boston, Mass.

Baggage Checks
R. Woodman Mfg. & Supply Co....Boston, Mass.

Bearings, Side
Chicago Railway Equipment Co.....Chicago, Ill.

Belting, Rubber
The Canadian Rubber Co. of Montreal.

Blankets and Bedding
The Hudson's Bay Co.....

Blasting Powder
Standard Explosives Limited.....Montreal.

Block Pavement Preservative
Carbolite Carbolineum Co.....Toronto.

Boiler Compound
N. J. Holden Co.....Montreal.

Boiler Covering
Mica Boiler Covering Co.....Montreal.

Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
E. Leonard & Sons.....London, Ont.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Internally Fired
Robb Engineering Co.....Amherst, N.S.

Boilers, Portable
Canada Foundry Co.....Toronto.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Stationary and Marine
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Steam
Babcock & Wilcox (Ltd.).....Montreal.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Water Tube
Babcock & Wilcox (Ltd.).....Montreal.
E. Leonard & Sons.....London, Ont.
Robb Engineering Co.....Amherst, N.S.

Boilers Tubes
Jas. W. Pyke & Co.....Montreal.

Bolsters
Simplex Railway Appliance Co.....Montreal.

Bolts, Bridge
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Bolts, Carriage and Machine
Toronto Bolt and Forging Co.....Toronto.

Bolts, Track
Canada Foundry Co.....Toronto.
Nova Scotia Steel & Coal Co...New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Box Car Loaders
W. H. C. Mssuen & Co.....Montreal.

Brake Beams
Chicago Railway Equipment Co.....Chicago, Ill.
Simplex Railway Appliance Co.....Montreal.

Brake Shoes
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.
N. J. Holden Co.....Montreal.

Brass and Copper Cloth
The B. Greening Co.....Hamilton, Ont.

Bridge Numbers
Acton Burrows Limited .....Toronto.

Bridges
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Bridges (Timber Preservative)
Carbolite Carbolineum Co.....Toronto.

Buckets
Cyclopean Iron Works Co.....Jersey City, N.J.

Bumping Posts
McCord & Co.....Chicago, Ill.
Mechanical Mfg. Co.....Chicago, Ill.

Buoy Lighting
Safety Car Heating and Lighting Co..New York.
Willson Gas Buoy Co.....Ottawa, Ont.

Cables, Electric and Feeder
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Caboose Heaters
Geo. R. Prowse.....Montreal.

Caps
W. H. Coddington.....Hamilton, Ont.

Car Castings
American Brake Shoe & F'dry Co...Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Car Fittings
The Robert Mitchell Co.....Montreal.

Car Heating
Wm. C. Baker Heating & Supply Co..New York.
Gold Car Heating and Lighting Co....New York.
Safety Car Heating and Lighting Co...New York.

Car Jacks
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Car Kitchen Equipments
Geo. R. Prowse.....Montreal.

Car Lighting
Gold Car Heating and Lighting Co....New York.
Safety Car Heating and Lighting Co...New York.

Car Movers
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
R. Woodman Mfg. & Supply Co....Boston, Mass.

Car Ranges
Geo. R. Prowse.....Montreal.

Car Replacers
Alexander Car Replacer Mfg. Co....Scranton, Pa.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.

Car Seals
R. Woodman Mfg. & Supply Co....Boston, Mass.

Carriage Steel
The Peck Rolling Mills.....Montreal.

Cars
American Palace Car Co....New York & Toronto.
Crossen Car Mfg. Co.....Cobourg, Ont.
Dominion Steel Car Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
Rhodes, Curry & Co.....Amherst, N.S.

Car Upholstery
N. J. Holden Co.....Montreal.

Car Windows
O. M. Edwards.....Syracuse, N.Y.

Castings
Crossen Car Mfg. Co.....Cobourg, Ont.

Castings, Brass
Canadian Bronze Co.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.
St. Thomas Brass Co.....St. Thomas, Ont.

Castings, Iron
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.

Castings, Iron and Steel
American Brake Shoe & F'dry Co...Mahwah, N.J.

Castings, Steel
Canadian Iron and Foundry Co.....Montreal.
W. Kennedy & Sons (Ltd.)....Owen Sound, Ont.
Montreal Steel Works.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.

Cast-Steel Hammers
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cast-Steel Track Tools
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cast-Steel Wrenches
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cattle Cars (Germicide)
Carbolite Carbolineum Co.....Toronto.

Cement Machinery
Jas. W. Pyke & Co.....Montreal.

Chains
B. J. Coghlin & Co.....Montreal.

Chimneys
Steel Concrete Co. (Ltd.).....Montreal.

Coal Haulage Ropes
The B. Greening Co.....Hamilton, Ont.

Coal Storage Plants
Steel Concrete Co. (Ltd.).....Montreal.

Concrete Construction
Forest City Paving & Construction Co.London,Ont

Concrete Mixers and Rock Crushers
Goold, Shapley & Muir Co.....Brantford, Ont.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Concrete Pipe
Steel Concrete Co. (Ltd.).....Montreal.

Contractors
Forest City Paving & Construction Co.London,Ont

Contractors' Plant
M. Beatty & Sons.....Welland, Ont.
J. T. Gardner.....Chicago, Ill.
F. H. Hopkins & Co.....Montreal.
The W. H. Kelson Co.....Montreal.
T. A. Morrison & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Vulcan Iron Works Co.....Toledo, Ohio.

Contractors' Supplies
Cyclopean Iron Works Co.....Jersey City, N.J.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Conveyors, Coal and Ash
Babcock & Wilcox (Ltd.).....Montreal.

Cooking Apparatus
Geo. R. Prowse.....Montreal.

Copperware
Geo. R. Prowse.....Montreal.

Copying Presses
James Smart Mfg. Co.....Brockville, Ont.

Cordage
McKenzie & Co.....Montreal.

Corrugated Furnaces
Continental Iron Works.....Brooklyn, N.Y.

Cotton Duck
McKenzie & Co.....Montreal.

Couplers, Car and Locomotive
National Malleable Castings Co...Cleveland, Ohio.

Couplers, Hose
Chicago Pneumatic Tool Co.....Chicago, Ill.

Cross Arms, Top Pins and Side Blocks
Canadian General Electric Co.....Toronto.

Cross Arm Braces
Canadian General Electric Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

ground in the spring. He expected that 1,000 miles of line would be constructed during the year.

Tests are reported to have been successfully made on the Bell Telephone Co.'s U.S. lines of an induction coil patented by Professor Sauve, Spokane, Wash., which is claimed to increase the effectiveness of telephones on long distance lines from 30 to 40%. It is stated that the most satisfactory test was made on the line between Seattle, Wash., and Los Angeles, Cal., conversation between the two points being easily carried on.

A bill is before the Dominion Parliament having for its object the amendment of the Act passed in 1906, respecting the control of telephone companies by the Board of Railway Commissioners. It is desired by the proposed amendment to extend the provisions for the interchange of business over long distance telephones to all telephone service. This would compel telephone companies operating in the same place to interchange service.

The Bell Telephone Co. has made an offer to the London, Ont., City Council of $4,000 a year and ten free telephones for the use of the city offices, for an exclusive franchise. A condition of the offer is that all special rates will be cut off. The matter is under consideration by a committee of the council, which has also before it an application of the Independent Long Distance Telephone Co. of Ontario, for a franchise. The Bell Co.'s franchise in London expires Dec. 31.

The Norfolk County Telephone Co. has been incorporated under the Ontario Companies Act, with a capital of $40,000 and offices at Waterford, Ont., for the purpose of carrying on a telephone business in the county of Norfolk; Oakland and Burford townships in Brant county; Walpole tp. in Haldimand county; North and South Norwich tps. in Oxford county. The provisional directors are: E. S. Barber, H. Bartholomew, J. H. McIlwraith, S. L. Squire, P. G. Perce, of Waterford, Ont.; C. H. Glover, F. L. Culver, of the tp. of Townsend, Ont.

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James Hutton & Co., Montreal.

THE VICTORIA ROLLING STOCK CO. OF ONTARIO, Limited.

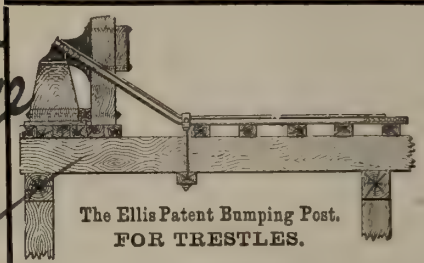
NOTICE is hereby given that a dividend of six per cent. on the paid-up capital stock of the Company for the half-year ended Nov. 30th, 1906, has been declared payable Dec. 1st, 1906, to the shareholders on record as of the 30th of Nov., 1906.

By order of the Board,

R. A. SMITH, Secretary.

Toronto, Nov. 19th, 1906.

WE MAKE
BLANK BOOKS
THE HUNTER, ROSE CO. LIMITED
TEMPLE BUILDING, TORONTO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FOR TRESTLES.

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SIMPLE, STRONG AND LASTING.
ADAPTED TO ALL POSITIONS ON THE GROUND OR TRESTLES
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DIVIDEND NOTICE.

NIAGARA NAVIGATION COMPANY,
LIMITED.

NOTICE is hereby given that a dividend of Four per cent. (being at the rate of Eight per cent. for the year) has been declared upon the Capital Stock of this Company, and the same will be payable on the 2nd of January, 1907.

The Transfer Books will be closed from the 17th of December to the 31st December, 1906, both days inclusive.

The Annual Meeting of the Shareholders will be held on Tuesday, the 8th of January, 1907, at noon, at the office of Messrs. Osler & Hammond, 21 Jordan street, Toronto.

By Order of the Board,

E. B. OSLER, President.

Toronto, Dec. 8th, 1906.

50 YEARS' EXPERIENCE
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Contractors' Plant, New and Second-hand; Steel Jaw Stone Crushers, all sizes; Sturtevant Roll Jaw and Rotary Fine Crushers; Balanced and Centrifugal Rolls; Emery Mills; Steam Road Rollers; Boilers and Engines; Rock Drills; Concrete Stone; Bridge and Building Limestone, Bricks, etc., etc.

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Of all descriptions to stock or special design, Apply to
The Canadian Office and School Furniture Co. Limited
Preston, Ontario

ALL RAILWAY MEN
SHOULD INSURE IN
The Accident and Guarantee Company of Canada
Head Office, Temple Building, - MONTREAL
Its Accident and Sickness Policies are the most liberal. . . . . .
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Manufacturers of Cast Iron Work for Railways, Mines and Buildings. Steel Elevator Buckets, Galvanized Iron Roofs, Etc.
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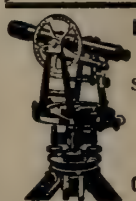
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Surveying and Engineering Instruments
BLUE AND BLACK PRINT PAPERS
NEW YORK
Chicago New Orleans San Francisco

Power Hammers, Friction Clutches and Cut-off Couplings
MILLER BROS. & TOMS, - MONTREAL, CANADA

Crossing Gates
The N. L. Piper Railway Supply Co.....Toronto.

Crowbars
B. J. Coghlin & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Culverts
Forest City Paving &ConstructionCo.,London,Ont
Steel Concrete Co. (Ltd.).....Montreal.

Culvert Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Cuts
Acton Burrows Limited.....Toronto.

Derrick Ropes
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton Ont.

Derricks
M. Beatty & Sons.....Welland, Ont.
E. F. Dartnell.....Montreal.
Miller Bros. & Toms.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Diaphragms
N. J. Holden Co.....Montreal.

Dies
Butterfield & Co.....Rock Island, Que.

Diving Outfits
John Date.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Doors (Ex-Platform Trap)
O. M. Edwards.....Syracuse, N.Y.

Door Signs
Acton Burrows Limited.....Toronto.

Draft Gear
McCord & Co.....Chicago, Ill.

Drawing Materials
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Dredges
M. Beatty & Sons.....Welland, Ont.
Vulcan Iron Works Co.....Toledo, Ohio.

Drills
W. Abbott.....Montreal.

Drills, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Electric
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Rock
Chicago Pneumatic Tool Co.....Chicago, Ill.

Dry Goods
The Hudson's Bay Co.....

Dump Cars (Contractors')
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Dust Guards
Soule Raw Hide Lined Dust Guard Co., Boston.

Dynamo and Electric Castings
American Brake Shoe & F'dry Co...Mahwah, N.J.

Economizers
Babcock & Wilcox (Ltd.).....Montreal.

Electric Car Fenders
The G. B. Meadows Wire, etc., Co.....Toronto.

Electric Car Route Signs
Acton Burrows Limited.....Toronto.

Electric Car Wire Guards
The G. B. Meadows Wire, etc., Co.....Toronto.

Electric Cranes
Canada Foundry Co.....Toronto.
E. F. Dartnell.....Montreal.
Dominion Bridge Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Electric Ry. Brake Shoes
American Brake Shoe & F'dry Co...Mahwah, N J.

Electrical Fuses
Standard Explosives Limited.....Montreal.

Enameled Iron Signs
Acton Burrows Limited.....Toronto.

Engineers, Consulting
W. H. Breithaupt.....Berlin, Ont.

Engineers' Supplies
Canadian Fairbanks Co.....Montreal.
The Canadian Rubber Co. of Montreal.

Engines, Automatic
Robb Engineering Co.....Amherst, N.S.

Engines, Corliss
E. Leonard & Sons.....London, Ont.
Robb Engineering Co.....Amherst, N.S.

Engines, Gasoline
Canadian Fairbanks Co.....Montreal.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.

Engines, Hoisting
M. Beatty & Sons.....Welland, Ont.

Engines, Stationary and Marine
Canada Foundry Co.....Toronto.
H. W. Petrie.....Toronto.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst N.S.

Excavators
Vulcan Iron Works.....Toledo, Ohio.

Explosives
Standard Explosives Limited.....Montreal.

Express Office Signs
Acton Burrows Limited.....Toronto.

Feedwater Heaters
Canadian Fairbanks Co.....Montreal.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Fencing
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.
Page Wire Fence Co.....Walkerville, Ont.

Fence Posts, Preservative
Carbolite Carbolineum Co.....Toronto.

Fire Brick
W. H. C. Mussen & Co.....Montreal.
F. B. Stevens.....Detroit, Mich.

Fire Clay
F. B. Stevens.....Detroit, Mich.

Fire Escapes
Locked Wire Fence Co.....London, Ont.
The G. B. Meadows Wire, etc., Co.....Toronto.

Flags
The Hudson's Bay Co.....

Flour
The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

Forgings
Crossen Car Mfg. Co.....Cobourg, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gas Buoys
Willson Gas Buoy Co.....Ottawa.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.
Page Wire Fence Co.....Walkerville, Ont.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Grain Elevators
John S. Metcalfe Co.....Chicago, Ill.

Groceries
The Hudson's Bay Company.....

Hammers
James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg, Ont.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hose, Air Brake and Steam
The Canadian Rubber Co. of Montreal.

Hose, Fire
The Canadian Rubber Co. of Montreal.

Hose, Suction
The Canadian Rubber Co. of Montreal.
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspection Cars
Canada Cycle and Motor Co..Toronto Junc., Ont.

Inspections
R. W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron Bars
The Peck Rolling Mills.....Montreal.

Iron Fencing
The G. B. Meadows Wire, etc., Co.....Toronto.

Iron, Pig
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Iron Signs
Acton Burrows Limited.....Toronto.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
McCord & Co.....Chicago, Ill.

Lager Beer, &c.
E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton, Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Lathes
H. W. Petrie.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H. Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.

Locomotive Stack Netting
The G. B. Meadows Wire, etc., Co.....Toronto.

Lubricators
McCord & Co.....Chicago, Ill.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.
H. W. Petrie.....Toronto.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

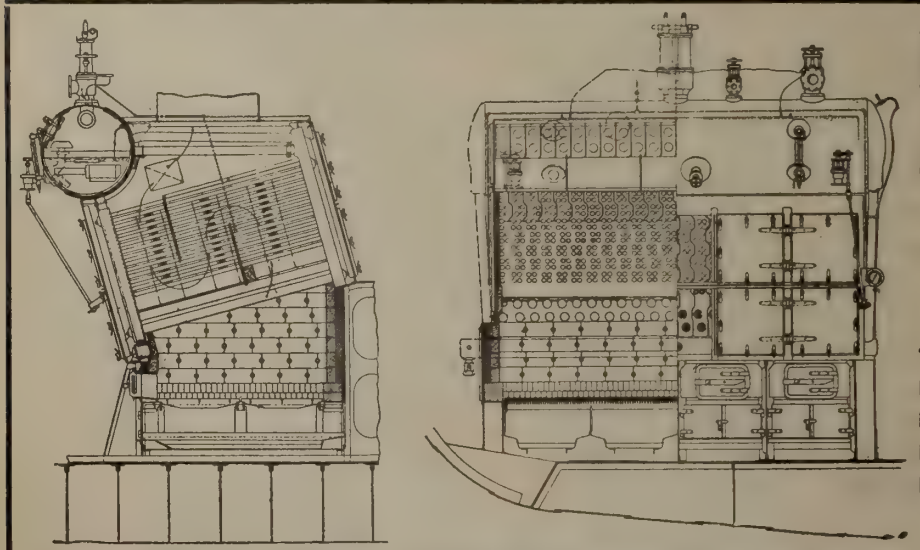
Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Mats and Matting
The Canadian Rubber Co. of Montreal.

Milepost Numbers
Acton Burrows Limited.....Toronto.
Milling Cutters
W. Abbott.....Montreal.
Milling Machines
H. W. Petrie.....Toronto.
Mills, Boring and Turning
H. W Petrie.....Toronto.
Motor Cars
Canada Cycle & Motor Co., Toronto Junc., Ont.
Motors
McCord & Co.....Chicago, Ill.
Nails, Cut and Wire
The Peck Rolling Mills.....Montreal.
Nickel
The Orford Copper Co.....New York.
Nickel for Nickel Steel
The Orford Copper Co.....New York.
Numbers
Acton Burrows Limited.....Toronto.
Nut Locks
Positive Lock Washer Co.....Newark, N.J.
Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.
Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.
Oakum
The Hudson's Bay Company.....
McKenzie & Co.....Montreal.
Office Desks
Canadian Office & School Furniture Co., Preston, Ont.
Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.
Office Railings
Locked Wire Fence Co.....London, Ont.
The G. B. Meadows Wire, etc., Co.....Toronto.
Office Signs
Acton Burrows Limited.....Toronto.
Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co., Franklin, Pa., and Toronto.
Packing
The N. L. Piper Railway Supply Co....Toronto.
Packing, High Pressure Sheet
The Canadian Rubber Co. of Montreal.
Packing, Piston
The Canadian Rubber Co. of Montreal.
Paints
Canadian Oil Co.....Toronto.
Paints, Damp Resisting
E. F. Dartnell.....Montreal.
Passenger Cars
American Palace Car Co., New York and Toronto.
Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.
Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.
Pipe Covering
Canadian Fairbanks Co.....Montreal.
Mica Boiler Covering Co.....Montreal.
Pipe Stocks
Butterfield & Co.....Rock Island, Que.
Planers
H. W. Petrie.....Toronto.
Plating Compositions
F. B. Stevens.....Detroit, Mich.
Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Plumbago
F. B. Stevens.....Detroit, Mich.
Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
Polishers' Supplies
F. B. Stevens.....Detroit, Mich.
Polishing Compositions
F. B. Stevens.....Detroit, Mich.
Porter
E. L. Drewry.....Winnipeg.
Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst, N.S.
Power Houses
Steel Concrete Co. (Ltd.).....Montreal.
Preservative for Wood
Carbolite Carbolineum Co.....Toronto.
Printing
The Hunter, Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.
Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.
Pumps
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.
Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.
Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.
The Peck Rolling Mills.....Montreal.
Rails (for relaying)
F. H. Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
T. A. Morrison & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rail Joints
Continuous Rail Joint Co. of Canada...Montreal.
N. J. Holden Co.....Montreal.
Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.
Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.
Reamers
W. Abbott.....Montreal.
Butterfield & Co.....Rock Island, Que.
Receivers, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.
Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.
Refrigerators
Geo. R. Prowse.....Montreal.
Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.
Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.
Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....
Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.
Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.
Rubber Tiling, Interlocking
The Canadian Rubber Co. of Montreal.
Sash Balances
O. M. Edwards.....Syracuse, N.Y.
Sash Locks
O. M Edwards.....Syracuse, N.Y.
Saw Steel
Montreal Steel Works.....Montreal.
Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.
Scrap Iron, Etc.
J. W. Townsend.....Halifax, N.S.
Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Screw Plates
Butterfield & Co.....Rock Island, Que.
Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.
Semaphore Arms
Acton Burrows Limited.....Toronto.
Semaphores
The N. L. Piper Railway Supply Co....Toronto.
Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.
Shade Rollers
O. M. Edwards.....Syracuse, N.Y.
Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.
Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Ships
Polson Iron Works.....Toronto.
Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....
Side Bearings
Simplex Railway Appliance Co.....Montreal.



BABCOCK & WILCOX
LIMITED

PATENT WATER TUBE BOILERS

For Marine and Stationary Purposes

The cut shows one of the sixteen Babcock & Wilcox Marine Boilers installed in H.M.S. DOMINION, and is the Standard adopted by the British Admiralty.

Head Office for Canada—New York Life Building, MONTREAL

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The Purchasing Agents' Guide—Continued.

Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Specialties in Brass and Iron Wire
The G. B. Meadows Wire, etc., Co.....Toronto.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co.....Boston, Mass.

Spikes, Railway, Ship or Pressed
F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co.....New Glasgow, N.S.
The Peck Rolling Mills.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville, Ont.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm. C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel Bars
The Peck Rolling Mills.....Montreal.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
The Peck Rolling Mills.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston, Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Targets
Acton Burrows Limited.....Toronto.

Tacks
The Peck Rolling Mills.....Montreal.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Punches
R. Woodman Mfg. & Supply Co.....Boston, Mass.

Ticket Wickets
The G. B. Meadows Wire, etc., Co.....Toronto.

Tie Plates
B. J. Coghlin & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Time Table Racks
The G. B. Meadows Wire, etc., Co.....Toronto.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Tool Steel
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Uniform Buttons
R. Woodman Mfg. & Supply Co.....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Rubber
The Canadian Rubber Co. of Montreal.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
McKenzie & Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa.

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa.

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
National Steel and Wire Co.....New York.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
National Steel and Wire Co.....New York.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
National Steel and Wire Co.....New York.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
National Steel and Wire Co.....New York.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire Lockers (Employes)
The G. B Meadows Wire etc. Co.....Toronto.

Wire, Telegraph and Telephone
National Steel and Wire Co.....New York.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

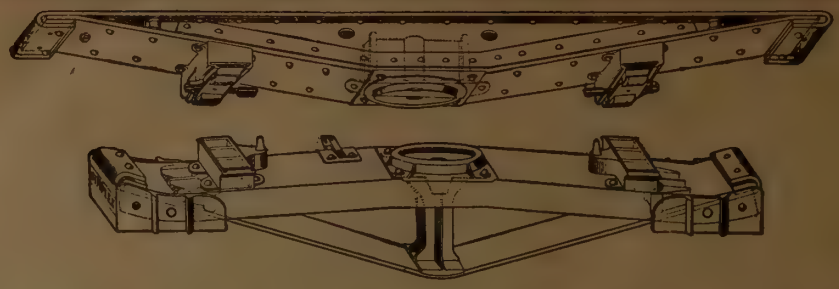
Woodworking Machinery
H. W. Petrie.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

SIMPLEX



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(SEE ADVERTISEMENT ON PAGE 469)

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See Purchasing Agents' Guide on page 141

See Alphabetical Index to Advertisements on page 109.

THE

Railway and Marine World

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Vancouver Island Rail Connection.

The Minister of Railways in May, 1906, instructed H. P. Bell, C.E., Victoria, B.C., to make a report concerning all-rail communi cation between Victoria, Vancouver Island, and the mainland of British Columbia. In the course of a lengthy report, Mr. Bell states that a clear introduction to the subject will be found in a report of Mr., now Sir, Sandford Fleming, then Chief Engineer of the C.P.R., made to the Dominion Government and dated Jan. 26, 1874. A lengthy quotation is made from this report, which refers to an earlier report by Marcus Smith, made in 1872, the particular part referred to and dealing with the examinations he made from Seymour Narrows along the west coast of Vancouver Island to Esquimalt. The survey made by Sir Sandford Fleming, or under his direction, was from Waddington harbor at the head of Bute Inlet, along the northwesterly shore of the inlet to Valdes Island, and passed over to Vancouver Island at Seymour Narrows; and from this point an exploration was made along the easterly shore of Vancouver Island to Esquimalt, and to the harbor at the head of Alberni canal or inlet. His observations upon the survey, as given in the report, follow: "For about 50 miles from Waddington harbor, the only course for the line is to follow the base of the high rocky mountains that extend along the Bute Inlet. On this section a great number of tunnels, varying from 100 to 3,000 ft. in length, through bluff, rocky points would be indispensable, and the work generally, even with unusually sharp curvature, would be very heavy. Careful examination has established the fact that to reach Vancouver Island from the mainland, the following clear span bridges would be required:

	Feet.
At Arran Rapids, clear span.....	1,100
At Cardero Channel, 1st opening.....	1,350
At Cardero Channel, 2nd opening.....	1,140
At Cardero Channel, 3rd opening.....	640
At Middle Channel	1,100
At Seymour Narrows, 1st opening....	1,200
At Seymour Narrows, 2nd opening ...	1,350

The length of the section across the group of islands known as the Valdes Islands, lying between the mainland and Vancouver Island, is about 30 miles. The channels to be bridged are of great depth, with the tide flowing from four to nine miles an hour. In crossing the islands, heavy rock excavation, and probably a few short tunnels, would be required. Taking everything into consideration, the work of construction on these 80 miles, lying between Waddington Harbor and Vancouver Island, would be of a most formidable character. I have myself made a general reconnaissance of portions of the country between Esquimalt and Seymour Narrows, and am satisfied from what I have seen and learned, that this line would be generally favorable with works of a moderate character. The whole distance between Seymour Narrows and Esquimalt would be about 160 miles; of this distance, 25 miles between the latter place and Cowichan would have heavy rock excavations. From Cowichan to Nanaimo, 35 miles, the work would be somewhat lighter. The remaining 100 miles would be very favorable. An exploration was made from the coast line to the harbor at the head of the Alberni canal, with satisfactory results. This examination showed that it would be quite practicable to carry the railway to the seaboard on the west coast of Vancouver Island by this route. Whatever point on the mainland be selected for the terminus of the Transcontinental railway, there can be no doubt that a line along the eastern coast of Vancouver Island will, at no distant day, form part of the railway system of British Columbia."

T. C. BURPEE,
Engineer of Maintenance of Way and Works, Intercolonial Railway.

The plans and profiles of the works to which the report quoted refer were burned in the fire which destroyed the Government C.P.R. survey offices at Ottawa in the winter of 1873-4. The British Pacific Ry. Co. did some location work upon the Vancouver Island portion of the route, the result of which was to confirm the opinion expressed by Sir Sandford Fleming with regard to its favorable features. In 1895 the B.C. Government had a survey made which covered within its terminal points the 80 miles of line referred to.

The observations of Mr. Bell upon the essential features of the work, and his estimates follow: "A prominent physical feature is the fact that the water is too deep and the natural slope of rock shores too precipitous for the making of embankments. Under the circumstances, the only recourse is to cut the whole roadbed continuously out of the solid, which means that there is not sufficient room for good curvature without tunnelling, and bad alignment becomes a necessity if very heavy works are to be avoided. It did not appear that these tunnels would be as numerous as the first line run suggested, provided that very sharp curvature was used to avoid them, but the fact remains that tunnelling is necessary for any alignment upon which a fairly good speed could be maintained. At the head of Bute Inlet (like the majority in British Columbia) the water shoals suddenly, and there is not sufficiently wide area for anchorage. . . . . It is doubtful even, whether the head of Bute Inlet is a fit landing for a ferry boat in all weathers, and it is not to be wondered at, that the late Marcus Smith wished to have a ferry with one terminus at the head of Frederick Arm. The entrance to Estero basin, Frederick Arm, however, is closed up by rockslide at low water, and would require heavy works to make it accessible even for a ferry boat. . . . A better point, however, can be found at no great distance. As regards the grading upon the 30 miles east of and terminating at Seymour Narrows, it is to be observed that the bridge crossings would probably have to be kept as at Quebec—150 ft. above high water level. With seven large bridges in a distance of 30 miles, it would not be possible to rise and fall between these bridges to any great extent, nor does it seem likely that a direct high level line could be found in so rough a country, or as Sir Sandford Fleming has it, 'In crossing the islands, heavy rock excavations and probably a few short tunnels would be required.' The suspension bridges before referred to would require piers for the navigable channels of variable heights, ranging from 260 to 300 ft. above water level. There would be 12 anchorages required for the cables of these bridges. The superstructure of the bridges enumerated by Sir Sandford Fleming, and taken from actual measurements upon the ground after careful examination of the crossings, have been approximately estimated as

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GUARANTEE COST per thousand miles for from one to five years, when conditions warrant it.

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CHARLES MILLER,

PRESIDENT.

regards costs. All of those enumerated, except one of 640 ft. span, have been estimated as single track, stiffened suspension bridges, capable of carrying the train load known as especial heavy (Dominion Government general specifications for steel bridges and viaducts, bearing date 1905.) Each one of these bridges is supposed to have one main span, and two side (or approach) spans, the side span equal to one-half the length of the main span. The general dimensions of these stiffened suspension bridges from 1,100 to 1,350 ft., both inclusive, are as follows: Average width of the floors, 40 ft. Versed sine or sag of the cable at the centre of the span one-tenth of the span length. The strength estimated as given these bridges is governed by the Dominion Government railway specifications before referred to where applicable, and where not applicable, as in the case of steel wire cables, the unit stress was taken at 40,000 pounds per square inch in reference to the fact that such steel wire can be procured with an ultimate strength of 100 tons of 2,000 lbs. per square inch. The type of truss chosen for the suspension bridge's estimate is similar to that designed by G. Lindanthal, Mem. Am. Society of Civil Engineers, for the Quebec Bridge competition. It would be possible to build a suspension bridge so heavy that it would not require a stiffening truss, but it might entail such a waste of material as to make it more economical to use the stiffening truss. In making the attached estimate, the work is supposed to be of the same standard as that set forth in the last G.T. Pacific Ry. general, and Dominion Government bridge specifications; in fact, such a road as the Government would build as a state enterprise, or such as the C.P.R. and G.T. Pacific Ry. are building with a good standard of traffic capacity in all respects.

It may be pointed out that previous surveys prove that the same amount of money that would be required to make continuous rail communication between Vancouver Island and the mainland would suffice to build a railway with a first-class car ferry from Comox on Vancouver Island, and from the mainland, to the summit of the Rocky mountains at the Yellowhead Pass, a distance of about 477 miles by the shortest yet explored route. It should not be considered that the traffic capacity of the ferry would be inferior to that of the all-rail connection, nor the time of transmission longer. The time is near at hand when the traffic by way of Seymour Narrows will be much greater than at present. The rock in mid-channel at the narrows, which has often been spoken of as the site of a bridge pier, is an obstruction to navigation. Would it not be much better in the interests of this navigation, to mine that rock with drill holes, driven from a crib, for 35 ft. in depth, and blow it up at one blast? It would still be possible to cross there with a suspension bridge of 2,800 ft. long, which is within the limit of strength of bridge material at the present time. It would seem to be of more importance that this navigation be improved, than that a saving should be made in the cost of building a bridge. Taking all things into consideration, it appears that the recommendation in favor of a ferry, made by Sir Sandford Fleming in 1874, will still hold good. The waterway built by nature, with no cost to the country, may reasonably be considered a more perfect aid to transportation than any road that ingenuity, aided by capital, can build, and to fail to utilize this advantage would not seem to accord with sound economical principles. On the other hand, the building of a railway from a well-chosen point on the west coast of the mainland into the mountains, via the Yellowhead Pass, would open up to mining that country which is pre-eminently well suited for alluvial work."

Approximate estimate of the cost of works required to make all-rail connection between Vancouver Island and the mainland of British Columbia:

54 miles of single line of railway, 4 ft. 8½ in. gauge, from Comox to Seymour Narrows, complete at $16,000 a mile	$ 864,000
80 miles of single line, same gauge, to the Mainland from Seymour Narrows eastward, at $70,000 a mile	5,600,000
Cost of tunnelling on these 80 miles of line, say	1,400,000
BRIDGES.	
15,900 tons of steel wire cable, in place, at $301 a ton	4,785,900
5,190 tons of steel wire rope, in place, at $349 a ton	1,811,310
460,000 tons of structural steel, in place, at $104 a ton	4,222,400
2,000 tons of steel castings, in place, at $200 a ton	400,000
MASONRY, CONCRETE AND TIMBER	
152,000 cubic yards masonry, face work, at $18	2,736,000
152,000 cubic yards concrete backing, at $8	1,216,000
5,000,000 feet b.m. timber, at $27	135,000
Add for omissions and contingencies, 10%	2,317,061
	$25,487,671

(The ton is 2,000 lbs.)

The Passenger Department of Canadian Steam Railways.

By G. T. Bell, General Passenger Agent, Grand Trunk Railway.

(*Continued from last issue.*)

This sowing of unrest, so aptly described, is an important part of the work of the passenger department particularly in charge of the advertising staff. I believe it is a safe assertion that of all the great agencies of our modern civilization none equal the transportation lines of Canada and of America in utilizing publicity in its myriad forms. One of our great Canadian railways, aside from the millions of readers repeatedly reached through its advertising in the daily and weekly newspapers, magazines, and other publications not issued by itself, distributed during the past year, almost entirely without cost to recipients, the enormous total of over 3,500,000 separate pieces of advertising, comprising finely printed and illustrated guide books to about a score of Canadian tourist and health resorts, wall and vest pocket maps, art prints—framed and unframed—of Canadian natural scenery and engineering and other achievements, packs of picture playing cards, timetables—complete, sectional, and local—posters and other bills. Nor does this include the display of large photographs, mounted fish and game, biograph pictures, stereopticon slides, etc., employed in world, international, national, sportsmen and travelling exhibitions, lectures and other forms of educational, industrial, sociological, and entertaining enterprises. I will not detain you by enlarging, but suggest it would be of interest to you to have a separate paper on "Art in railway advertising," or a like subject, from some of our experts in this field. Nor can justice be done in a single paper to the immigration and colonization side of the passenger department work which, in co-operation with the Dominion and Provincial authorities, is of vital and far-reaching importance to the whole of Canada. This also should be treated separately, and I am sure will be of special interest at this time when extraordinary activity is manifest everywhere both as to new settlers and the opening up of millions of acres of fertile land.

I will pass over the statistical and accounting branches of the passenger department, without which its effective work would be much impaired by lack of comparison of results which the statistics furnish on the one hand, and by confusion in dealing with the multitude of bills for advertising, printing, etc., on the other; nor will I delay to explain the system of dealing with the thousands of claims for refunds upon unused or partly used tickets, chiefly growing out of human joy, sorrow, vicissitude, and instability; but, with your indulgence, will say a little about that important side of the passenger department which aids in supplying the sinews of war for us all, namely, passenger earnings

When Canadian steam railways earn for carrying passengers from the single track mileage of 20,487, which they operated last year, the grand total of $154,410,519, instead of $28,959,650, they will have reason to congratulate themselves, as their passenger earnings will then equal those of the New England railways which enter the State of Massachusetts, and which last year, with a total of 4,962 single track miles, received from passengers $37,399,209. But this desirable result will probably not be attained until 512,933,019 passengers annually travel on the 20,487 miles of track, instead of 25,288,723 passengers who paid fares last year. For every mile of track the New England passengers paid for transportation $7,537, against $1,413 paid in Canada. Twenty-five thousand and thirty-seven passengers in the year used the New England railways, and only 1,234 passengers used the Canadian railways for each mile of track operated. If all of the steam railways in the U.S., outside of the 4,962 miles in New England, had received from passengers the same gross earnings per track mile as the New England railways, instead of $435,295,523, those railways not within the passenger man's Garden of Eden would have earned from passengers on their 212,011 miles of track $1,597,926,907. Did I hear anyone remark that the "conditions" in New England must be vastly different than in the rest of the United States and in Canada? Exactly so!

And what is the essential element in this difference of "conditions"? Density of population—not of the people, for nowhere else in America have we so much culture in so small an area. According to the latest census, each 1,000 persons in Massachusetts helped to support only three-quarters of one mile of the 2,111 miles of steam railway track in that State; whereas, in our most populous Province of Ontario the same number of persons help to keep passenger trains moving on three and one-quarter miles of steam railway track. And if you consider that the 1,000 prospective passengers are spread over Massachusetts at the average density of 350 to each square mile of area in that state, against 10 to each square mile in Ontario, it will help you further to grasp why the steam railways of Canada are unwilling to abandon the fruits of much experience for the theories of the demagogue. A city seven miles long and two miles wide has an area of 14 square miles. With a population of 400,000 such a city would average 28,571 to each square mile. On 124 miles of track the Montreal Street Ry. last year carried 64,334,418 passengers, an average of 518,826 passengers for each track mile. This is a condition of density which justifies the application of the zone system of fares, where you pay as much for 100 yards as for 1,000 or 10,000 yards. The districts within and surrounding great cities are the nearest approach to a condition where experiments with the zone method of passenger fares may be carefully undertaken, and the steam railways already recognize that principle to some extent in their commutation fares for daily patrons of their suburban trains. The people of Canada are, however, much more vitally interested in having railways enough to develop all parts of their great country, and in the prosperity of their partners, the railways, than in the maximum rate per mile which, owing to voluntary reductions

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already alluded to, is paid only by transient passengers, who are but a small percentage of the total number carried. The railways should be permitted to work out their destinies and tariffs in accordance with the good, old, safe law of supply and demand, and without undue, and often unreasonable, legislative interference. If the comparatively few transient passengers pay less, the masses, of limited incomes, and who cannot afford to travel except on public holiday and other greatly reduced excursion fares, must pay more; otherwise the service must deteriorate and contract instead of continuing to improve and expand. Evidence that the railways are not unmindful of public comfort and are willing, if not bound, to divide their prosperity with the public is furnished by the fact that the old and disliked mixed trains are gradually disappearing, last year the total mileage of such trains on all Canadian railways being 6,133,098, against 9,530,816 in 1904, a reduction of 36%, and while gross passenger earnings from 1901 to 1905 increased 49%, deposits by the public in the chartered banks of Canada increased by $159,733,530 in the same period, equal to more than 50%, which magnificent increase exceeded the gross earnings of all the Canadian steam railways from passenger, freight and all other sources of traffic last year by $53,266,331.

The foregoing was read at a meeting of the Canadian Railway Club recently.

Orders by the Railway Commissioners.

The following orders have been issued by the Board of Railway Commissioners:

1982. Nov. 10.—Authorizing the C.P.R. to reconstruct bridge 33338, mileage 70.9, Kenora section, Ont.

1983. Nov. 10.—Authorizing the C.P.R. to reconstruct bridge 33194-3, mileage 73.8, Ignace section, Ont.

1985. Nov. 19.—Authorizing the C.P.R. to construct a branch from its railway on Higgins Ave., Winnipeg, a distance of about 38 ft. westerly from the westerly limit of Nena St., produced northerly; thence southwesterly direction for 676 feet.

1986. Nov. 10.—Authorizing the C.P.R. to reconstruct bridge B-2-95, mileage 26-8, and B-2-94, mileage 28.2, Esquimalt and Nanaimo Ry.

1990. Nov. 6.—Directing the G.T.R. to adopt and use an interlocking and derailing plant where its lines are crossed by the C.P.R. on lot 8, 9th con., Yarmouth tp., Ont., the cost to be borne by the C.P.R.

1991. Nov. 19.—Authorizing the construction of the C.P.R. over portion of road allowance between cons. 8 and 9, Tp. Dumfries North, Ont.

1992. Nov. 9.—Sanctioning revised location of Wolseley-Reston Branch of C.P.R., mileage 0 to 11.5.

1993. Nov. 17.—Extending the time one year for use of crossing, at rail level, by the Vancouver, Westminster and Yukon Ry., of the B.C. Electric Ry. tracks on Park Avenue, Vancouver, B.C.

1994. Nov. 17.—Approving location of Canadian Northern Ry. through tps. 1 and 2, ranges 18 and 19, w.p.m., mileage 45 to 53.10, west from Greenway, Man.

1995. Nov. 19.—Ruling in regard to refund to Montreal exporters on butter, cheese, and eggs for export season of navigation, 1905.

1996. Oct. 22.—Authorizing the Midland Ry. of Manitoba to cross the C.P.R. tracks at Morden, Man.

1997. Nov. 19.—Providing that all tariffs of express tolls shall be in such form, size, and style, and give such information, particulars, and details as the Board from time to time may prescribe.

1998.—Nov. 20.—Approving of revised location of portion of main line of Vancouver, Westminster and Yukon Ry. from junction of its tracks with the C.P.R. near 10th St., New Westminster, B.C., to station 71-72, beyond 18th St., New Westminster.

1999. Nov. 8.—Directing the C.P.R. to construct a suitable highway crossing where its railway intersects Fourth Street, High River, Alta.

2000. Nov. 22.—Approving supplements 1, 2, 3, and 4 of Standard Passenger Tariff C.R.C. no. W. 38 of the C.P.R.

2001. Nov. 18.—Rescinding order of the Board of May 25, 1906, authorizing the Windsor, Essex and Lake Shore Rapid Ry. to cross the Michigan Central Rd. tracks by means of a subway in Essex, Ont.

2002. Nov. 22.—Authorizing the Canadian Northern Ontario Ry. to place its tracks across Olive, Vine, and Water streets, between Eastern Avenue and Front St., Toronto.

2003.—Nov. 22.—Granting the Canadian Northern Ontario Ry. leave to construct its line across the Don Esplanade, between Queen St. and Eastern Avenue, and across Eastern Avenue west of Cypress St., Toronto.

2004. Nov. 17.—Authorizing the C.P.R. (lessee of the Manitoba and North-Western Ry.) to construct a branch line from point on main line 2,000 ft. southerly from Saltcoats station, Sask., to the G. R. McCracken Milling Co.'s premises.

2005. Nov. 17.—Authorizing the C.P.R. to construct certain bridges on the Toronto-Sudbury Branch.

2006. Nov. 17.—Authorizing the C.P.R. to construct a bridge at mileage 6.4, Windsor section, Ont.

2007. Nov. 17.—Authorizing the C.P.R. to construct a bridge over Battle River, Wetaskiwin branch, Alta.

2008. Nov. 17.—Authorizing the C.P.R. to construct a bridge at mileage 44.83, White River, Ont.

2009. Nov. 17.—Authorizing the C.P.R. to construct a bridge at mileage 28.6, Nakusp and Slocan branch, B.C.

2010. Nov. 17.—Authorizing the C.P.R. to construct a bridge at mileage 108.16, Thompson section, B.C.

2011. Nov. 17.—Authorizing the C.P.R. to construct a bridge at mileage E 46 A, Edmundston branch, N.B.

2012. Nov. 17.—Authorizing the C.P.R. to construct a bridge over Government drainage ditch on the Molson cut-off, Kenora section, Man.

2013. Nov. 17.—Authorizing the C.P.R. to construct its line across existing highways in North Himsworth tp., district of Parry Sound, and Ferris tp., district of Nipissing, Ont.

2014 Nov. 17.—Authorizing the C.P.R. to construct a spur from station 3043+50.3, distant 1,090 ft. from m.p. 73, into the Nichols Chemical Co.'s premises.

2015. Nov. 17.—Authorizing the C.P.R. (lessee of the Ontario and Quebec Ry.) to construct a branch line in Toronto from point on centre line of main line on the North Toronto branch into Haney & Miller's premises, a distance of 691 ft.

2016. Nov. 21.—Authorizing the C.P.R. to construct its Toronto-Sudbury branch at rail level across the highway at mile 31.6, Essa tp., Simcoe county, Ont.

2017. Nov. 22.—Authorizing the G.T.R. to construct an additional track across public road leading to Port Sidney, north of Utterson station, Muskoka, Ont.

2018. Nov. 19.—Permitting the Town of Orillia to lay a water pipe under the G.T.R. at Colborne St., Orillia, Ont.

2019. Nov. 12.—Authorizing the C.P.R. to construct a bridge at mileage 94.0, Edmonton branch, Alta.

2020. Nov. 12.—Authorizing the C.P.R. to construct a bridge at mileage 12.2, Eganville branch, Ont.

2021. Nov. 12.—Authorizing the C.P.R. to construct a bridge through Government dainage ditch Lariviere section, Man.

2022. Nov. 12.—Authorizing the C.P.R. to construct a bridge at mileage 1.1, Kenora section, Ont.

2023. Nov. 12.—Authorizing the C.P.R. to construct bridges at mileage 28.4 and 28.6, Esquimalt and Nanaimo Ry., B.C.

2024. Nov. 19.—Authorizing the C.P.R to construct a bridge at mileage 51, Woodstock section, Ont.

2025. Nov. 20.—Authorizing the C.P.R. to construct a bridge, number B-2-12, mileage 82.89, "Soo" branch, Ont.

2026. Nov. 9.—Authorizing the Canadian Northern Ontario Ry. to operate its trains over various bridges upon the James Bay section of its line.

2027. Nov. 26.—Authorizing the Commercial Cement Co. to construct a trestle or tramway over the Canadian Northern Ry. 72 miles west of Winnipeg.

2028. Nov. 26.—Authorizing the C.P.R. to open for traffic its line from Winnipeg Beach to Gimli, Man., 9.3 miles.

2029. Nov. 26.—Authorizing the Commissioners of the Trans-Continental Ry. to join its tracks with the C.P R. tracks west of Rennie station, Man., upon the Commissioners installing an interlocking plant and providing a signal man for the operation of the same.

2030. Nov. 12.—Authorizing the Canadian Northern Ontario Ry. to lay its tracks across the G.T.R. tracks in Hawkesbury, Ont., on putting in an interlocking plant, and providing for the maintenance and operation of the same.

2031. Nov. 12.—Authorizing the Canadian Northern Ontario Ry. to cross the G.T.R. spur line to Edwards' Mill at Rockland, Ont., between mileage 36 and 37 west of Hawkesbury upon putting in a diamond and semaphores.

2032. Nov. 9.—Granting permission to the Canadian Northern Ontario Ry. to construct a bridge over Burnt Creek, Neelon tp., Nipissing district, mileage 107.1 north from Parry Sound, Ont.

2033. Nov. 9.—Authorizing the C.P.R. to construct bridges at mileage 7.7 and mileage 7.8, Laggan section, B.C.

2034. Nov. 10.—Sanctioning the erection of bridge B-2-88, at mileage 94.0, Edmonton branch C.P.R.

2035. Nov. 21.—Authorizing the Bell Telephone Co. to carry wires across C.P.R. tracks at Cherry Street, Toronto.

2036. Nov. 20.—Sanctioning the construction of bridge B-2-45, mileage 6.8, Orangeville, Ont., on the C.P.R.

2037. Nov. 20.—Granting permission to the C.P.R. to construct bridge B-2-26, mileage 46.45, Nepigon section, Ont.

2038. Nov. 20.—Authorizing the C.P.R. to construct bridges at mileages 85.6, 117.6 and 111.2, Shuswap section, B.C.

2039. Nov. 20.—Granting permission to the C.P.R. to construct bridge B-2-64, mileage 68.5.

2040. Nov. 20.—Authorizing the C.P.R. to construct bridges at mileages 77.4, 34.4, 80.07, 52.05 and 54.1, Ignace section, Ont.

2041.—Nov. 20.—Authorizing the C.P.R. to construct a bridge at mileage 3.9, Fredericton branch, N.B.

2042. Nov. 20.—Granting permission to the C.P.R. to construct bridges at mileages 58.7 and 57.4, Smith's Falls section, Ont.

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2043. Nov. 20.—Authorizing the C.P.R. to construct bridges at mileages 111.45, 112.34, 28.63, 73.43, 106.17, 31.62, 101.11, and 43.24, Fort William section, Ont.

2044. Nov. 20.—Sanctioning the erection of a bridge at mileage 41.6, Montreal and Ottawa section C.P.R.

2045. Nov. 20.—Sanctioning erection of bridge at mileage 1.5, Edmonton branch C.P.R., Alta.

2046. Nov. 20.—Authorizing the C.P.R. to erect a bridge at mileage 100.5, Woodstock section, Ont.

2047. Nov. 20.—Sanctioning the erection of a bridge at mileage 7.17, Port Burwell, Ont., branch C.P.R.

2048. Nov. 20.—Granting permission to the C.P.R. to construct bridges at mileages 3.3, 3.2, 51.47, 0.6, 49.3, 49.5, 50.3 and 50.9, Kenora section, Ont.

2049. Nov. 17.—Authorizing the C.P.R. to construct bridges at mileages 62.5 and 50.4, Chalk River section, Ont.

2050. Nov. 27.—Approving supplement 2 to C.P.R. Standard Passenger Tariff C.R.C. no. E 93 (cancelling Supplement 1).

2051. Nov. 26.—Authorizing opening of C.P.R. Staynerville branch from Staynerville station, Argenteuil, Que., to Brunette's Quarry.

2052. Nov. 15.—Directing the C.P.R. to establish a suitable highway crossing where its railway intersects Huron St. produced across its right of way within the limits of Steelton, Algoma, Ont.

2053. Nov. 26.—Authorizing the People's Telegraph and Telephone Co. to erect a telephone wire across the G.T.R. tracks at Killaloe Station, Ont.

2054. Nov. 28.—Authorizing a similar crossing of the G.T.R. at Golden Lake, Ont., by the People's Telegraph and Telephone Co.

2055. Nov. 27.—Similar order respecting the P.T. and T. Co., carrying its wire across the G.T.R. at Wilno Station, Ont.

2056. Nov. 28.—Authorizing the North American Telegraph Co. to carry its telegraph line across the G.T.R. tracks at Mallorytown, Ont.

2057. Nov. 28.—Granting permission to the C.P.R. to construct a spur line in Vancouver, B.C., to P. Burns and Co.'s premises.

2058. Nov. 28.—Authorizing the C.P.R. to construct a spur line in Indian Head, Sask., to the Indian Head power house.

2059. Nov. 28.—Sanctioning the construction by the C.P.R. of a spur line and siding in Pinto, Sask., to the Western Coal Mining Co.'s property.

2060. Nov. 28.—Authorizing the C.P.R. to construct a spur line in Toronto to John Arnold's premises.

2061. Nov. 28.—Granting the C.P.R. permission to construct a spur to the Mundy Lumber Co.'s premises, from mile post 15 west of Revelstoke, B.C.

2062. Nov. 28.—Authorizing the C.P.R. (lessee of the Columbia and Western Ry.) to construct a spur line from mile post 3, south of Castlegar, B.C., to the China Creek Lumber Co.'s premises.

2063. Nov. 28.—Authorizing the C.P.R. (lessee of the British Columbia Southern Ry.) to construct a spur line from Coal Creek, B.C., across the Elk River to the Elk River Lumber Co.'s premises.

2064. Nov. 28.—Authorizing the C.P.R. to construct bridges over Still, Magnetawan, and Muskox Black rivers, Sudbury-Kleinburg branch, Ont.

2065. Nov. 26.—Authorizing the C.P.R. to divert a highway in Carling tp., Parry Sound district, Ont., at mileage 90, Sudbury-Kleinburg branch.

2066.—Nov. 28.—Approving diversion of a highway at mileage 86, C.P.R. Sudbury-Kleinburg branch, in Carling tp., Parry Sound district, Ont.

2067. Nov. 28.—Granting permission to the C.P.R. to divert a highway at mileage 94, Sudbury-Kleinburg branch, McDougall tp., Parry Sound district, Ont.

2068. Nov. 28.—Granting similar permission in respect of a road at mileage 91.3 in same township.

2069. Nov. 28.—Approving deviation of the route of the Guelph and Goderich Ry. between Linwood and Listowel, Ont.

2070. Nov. 28.—Authorizing the C.P.R. to open for traffic the Wetaskiwin branch of the Calgary and Edmonton Ry. from Daysland to Hardisty, Alta.

2071. Nov. 29.—Authorizing the General Freight and Passenger Agent of the Canadian Northern Ontario Ry. to prepare and issue tariffs of tolls to be charged.

2072. Nov. 29.—Granting permission to the Ontario Power Co., Niagara Falls, Ont., to maintain a transmission line across the Michigan Central Ry. tracks west of the company's distributing station in Stamford tp., Ont.

2073. Nov. 29.—Authorizing the Ontario Power Co., Niagara Falls, Ont., to carry its transmission line across the Niagara, St. Catharines and Toronto Ry. tracks at Allan St., and Portage Road, Stamford tp., Ont.

2074. Nov. 29.—Authorizing the Ontario Power Co., Niagara Falls, Ont., to carry its transmission line across the Niagara, St. Catharines and Toronto Ry. tracks at Dixon and Stanley streets, Stamford tp., Ont.

2075. Nov. 29.—Authorizing the carrying of power transmission lines across the Niagara, St. Catharines and Toronto Ry. tracks at Victoria and Morrison streets, Niagara Falls, Ont., by the Ontario Power Co. of Niagara Falls.

2076 and 2077. Nov. 26.—Approving deviation of the C.P.R. line in Sudbury, Ont., and rescinding order 1941, of Nov. 10, in respect of the same matter.

2078. Nov. 29.—Authorizing the Welland County Telephone Co. to carry its lines across the Michigan Central Rd. tracks at six different points in and near Stevensville Ont

2079. Nov. 29.—Authorizing the Welland County Telephone Co. to carry its wires across the G.T.R. at Bridgeburg, Niagara Jct., and at the fourth crossing west of Stevensville, Ont.

2080. Nov. 29.—Sanctioning the laying of gas mains under the G.T.R. tracks at Queen St., Galt, Ont., by the Dominion Natural Gas Co.

2081. Nov. 29.—Authorizing the C.P.R. to construct a spur in Indian Head, Sask., to Campkin, Cole & Williamson's premises.

2082. Nov. 30.—Granting permission to B. Wase & Son, Toronto, to carry three wires for the conveyance of light and power across the C.P.R. tracks at North Toronto, Ont.

2083. Nov. 20.—Authorizing the Michigan Central Rd. to operate its trains across the Niagara Falls, Wesley Park and Clifton Tramway Co.'s tracks at Victoria Ave., Niagara Falls, Ont.

2084 to 2095. Nov. 29.—Authorizing the Ontario Power Co., Niagara Falls, Ont., to carry its transmission lines across the Niagara, St. Catharines and Toronto Ry., the Michigan Central Rd., and the International Ry. tracks at various points in Stamford tp., Ont.

2096. Nov. 7.—Approving location plans for Canadian Northern Ontario Ry. from south of Queen St., Don Esplanade, to the street line of Eastern Ave., Toronto.

2097. Nov. 27.—Authorizing the Vancouver, Westminster and Yukon Ry. to carry its tracks across the C.P.R. spur line to Fraser River mills, New Westminster, B.C.

2098. Dec. 4.—Approving amended location plans for G. T. Pacific Ry. from mileage 75.183 to mileage 83.708, East Alberta.

2099. Dec. 4—Approving location of Manitoba and North-Western Ry., Quill Lake branch, mileage 0 to mileage 31, Sask., on application of the C.P.R.

2100. Dec. 1.—Approving by-law of Dominion Express Co., Nov. 12, 1906, authorizing the President and General Manager of the company to issue tariffs of express tolls to be charged.

2101. Dec. 5.—Approving standard passenger tariff C.R.C. no. 161, at the rate of 3c. per mile for the Brandon, Saskatchewan and Hudson's Bay Ry.

2102. Dec. 5.—Approving standard freight tariff C.R.C. no. A145, of the Brandon, Saskatchewan and Hudson's Bay Ry.

2103. Dec. 5.—Approving standard passenger tariff C.R.C. no. 1, of the Canadian Northern Ontario Ry.

2104. Nov. 29.—Approving supplement no. 6, to standard passenger tariff C.R.C. no. 19, Vancouver, Victoria and Eastern Ry. and Navigation Co.

2105. Nov. 29.—Amending rule as to interlocking and derailing signals, etc. See Jan., pg. 23.

2106. Dec. 1.—Authorizing the Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co. to construct a spur along Smith St., Regina, Sask.

2107. Dec. 4.—Varying the order of the Railway Committee of the Privy Council, of Dec. 16, 1902, respecting the position of signals at the crossing of the G.T.R. by the Port Burwell branch of the C.P.R. (Tillsonburg, Lake Erie and Pacific Ry.), and directing that the normal position of the signals shall be at danger.

2108. Nov. 24.—Authorizing the C.P.R. to construct a drain through lands adjoining its railway at Kaladar, Addington county, Ont.

2109. Dec. 7.—Approving location of Canadian Northern Ontario Ry. through Horton, Ross and Westmeath tps., Ont., mileage 57.5 to mileage 72.00 north from Ottawa.

2110. Dec. 7.—Authorizing the C.P.R. to carry its tracks across the Qu'Appelle, Long Lake and Saskatchewan Rd. tracks at Saskatoon, Sask., and to use the same for the passing of construction trains only, until May 1, 1907.

2111. Dec. 6.—Sanctioning change in location of the C.P.R. station at Webbwood, Ont.

2112. Dec. 7.—Authorizing the Toronto, Hamilton and Buffalo Ry. to construct a spur in Brantford tp., Ont., from mileage 3618 + 50.5, and terminating at mileage no. 3623 + 18.8.

2113 and 2114.—Bell Telephone Company crossings.

2115. Nov. 16.—Amending or varying order of the Board dated Feb. 14, 1906.

2116. Nov. 28.—Authorizing the Brandon, Saskatchewan and Hudson's Bay Ry. to maintain a telegraph line across the C.P.R. tracks near Carroll, Man.

2117. June 21.—Authorizing the James Bay Ry. to lay its tracks across the tracks of the spur extending from the Belt Line owned by the G.T.R. on lot 13, con. 2, from the Bay, York tp., Ont., at mileage 3.80, Toronto North.

2118. Dec. 4.—Authorizing the James Bay Ry. to lay its tracks across tracks of spur extending from Belt Line of G.T.R. in lot 13, con. 2, from the Bay, York tp., Ont., at mileage 3.80, Toronto North.

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2119. Nov. 28.—Authorizing the C.P.R., as lessee of the Ontario and Quebec Ry., to cross the G.T.R. on the Don Improvement, Toronto.

2121. Dec. 10.—Granting permission to the Georgian Bay and Seaboard Ry. to carry its tracks across certain streets and lands in Orillia, Ont.

2122. Dec. 7.—Authorizing the G.T.R. to construct a siding in Peterborough, Ont., to opposite the premises of the Peterborough Fuel and Cartage Co.

2123. Dec. 5.—Sanctioning the construction by the C.P.R. of a bridge over Broken Head River, on Molson's cut-off, Kenora section, Ont.

2124. Dec. 5.—Granting permission to the Peterborough, Ont., City Council to lay a nine-inch sewer pipe under the G.T.R. tracks at Romaine St., Peterborough.

2125. Nov. 27.—Authorizing the G.T.R. to carry the tracks of the Lynden and Brantford section of its line across Elgin St., Brantford, Ont., by means of a bridge.

2126, 2127, and 2128. Dec. 5.—Authorizing the North American Telegraph Co. to maintain 20 telegraph and telephone lines across the Bay of Quinte Ry. siding 1¾ miles west, ¾ miles west and 45 ft. west of Erinsville station, Ont.

2129, 2131, 2132, and 2133.—Dec. 5.—Bell Telephone Co.'s crossings.

2130. Oct. 25.—Authorizing the C.P.R. to carry Nelson St., Sudbury, Ont., across its railway by means of an overhead bridge.

2134. Dec. 7.—Authorizing the Guelph Radial Ry. to carry an electric power feed wire across the G.T.R. tracks at Edinboro' road, Guelph, Ont.

2135. Dec. 5.—Granting permission to the Plymouth Cordage Co. to lay a gas main under the G.T.R. tracks at Lincoln St., Welland, Ont.

2136. Dec. 5. — Authorizing the Plymouth Cordage Co. to lay and maintain a gas pipe under the G.T.R. tracks where same cross Lincoln St., Welland, Ont.

2137.—Dec. 8.—Extending the time for the installation by the Brandon, Saskatchewan and Hudson's Bay Ry., of an interlocking plant at its crossing of the C.P.R. near Carroll, Man., for three months from Oct. 21, 1906.

2138. Dec. 5.—Bell Telephone Co. crossing.

The New Canadian Tariff.

In the new tariff, which the Government is asking the Dominion Parliament to approve at its current session, the duties are fixed in three separate tariffs, one the British Preferential Tariff, second the Intermediate Tariff, and third a General Tariff. Under the new tariff Admiralty charts will be admitted free under all heads.

Iron and steel railway bars or rails of any form, punched or not, not otherwise provided for, for railways, which term for the purposes of this item shall include all kinds of railways, street railways and tramways, even although they are used for private purposes only, and even although they are not used or intended to be used in connection with the business of common carrying of goods or passengers, $4.50 per ton, under the British Preferential Tariff; $6 under the Intermediate Tariff; and $7 under the General Tariff.

Iron or steel railway bars or rails which have been use in the tracks of railways in Canada, and which have been exported from Canada and returned thereto after being rerolled, and weighing not less than 56 lbs. per lineal yard when re-rolled, and which are to be used by the railway company importing them on its own tracks, under regulations prescribed by the Minister of Customs, 25c. per ton under all the tariffs. Provided that the value for duty of such re-rolled rails shall be the cost of re-rolling of the same. Provided also that whenever the Governor-in-Council is satisfied that a mill adapted and equipped for rolling such rails in substantial quantities has been established in Canada, the Governor-in-Council may abolish the duty specified in this item, and thereupon all such rails, when imported into Canada, shall be subject to such duty as otherwise provided in the Customs Tariff.

Railway fish plates and tie plates, per ton, $5, $7 and $8.

Switches, frogs, crossings and intersections of railways, 20%, 30% and 32½%.

Iron or steel bridges or parts thereof, iron or steel structural work, columns, shapes or sections, drilled, punched, or in any further state of manufacture than as rolled or cast, n.o.p., 22½%, 30% and 35%.

Springs, axles, axle bars, n.o.p., and axle blanks or parts thereof, of iron or steel, for railway, tramway or other vehicles, 22½%, 30% and 35%.

Locomotives and motor cars for railways and tramways, n.o.p., 22½%, 30% and 35%.

Telephone and telegraph instruments, electric motors, dynamos, generators, etc., 15%, 25% and 27½%.

Locomotive and car wheel tires, of steel in the rough, free.

Machinery or appliances of iron or steel of a class or kind not made in Canada, and elevators and machinery of floating dredges when for use exclusively in alluvial gold mining, free.

The following articles and materials when imported by manufacturers of automatic gas buoys and automatic gas beacons, for use in the manufacture of such buoys and beacons for the Government of Canada, or for export under regulations prescribed by the Minister of Customs, viz., iron or steel tubes over 16 in. in diameter; flanged and dished steel heads made from boiler plate over 5 ft. in diameter; hardened steel balls not less than 3 in. in diameter; acetylene gas lanterns and parts thereof, free.

Iron or steel masts or parts thereof, and iron or steel beams, angles, sheets, plates, knees and cable chain, for wooden, iron, steel or composite ships and vessels; and iron, steel or brass manufactures which at the time of their importation are of a class or kind not manufactured in Canada, when imported for use in the construction or equipment of ships or vessels under regulations prescribed by the Minister of Customs, free.

Ships and other vessels built in any foreign country, if British registered since Sept. 1, 1902, on application for license to engage in the Canadian coasting trade, on the fair market value of the hull, rigging, machinery, furniture and appurtenances thereof (as provided in an act respecting the coasting trade of Canada), 25% under the Intermediate and General Tariffs.

Vessels, dredges, scows, yachts, boats and other waterborne craft, built outside Canada, of any material destined for use or service in Canadian waters (not including registered vessels entitled to engage in the coasting trade, nor vessels in transit between Canada and any place outside thereof, n.o.p., on the fair market value of the hull, rigging, machinery, boilers, furniture and appurtenances thereof, on arrival in Canada, 15% under the British Preferential Tariff, and 25% under the Intermediate and General Tariffs. Provided that regulations may be prescribed by the Minister of Customs for exemption from further duty after the duty specified in this item is once paid.

Railway or other cars, wheelbarrows, trucks, road or railway scrapers and handcars, 20%, 27½% and 30%

Locomotives and railway passenger, baggage and freight cars, being the property of railway companies in the U.S., running along any line or road crossing the frontier, so long as Canadian locomotives and cars are admitted free under similar circumstances into the United States, under regulations prescribed by the Minister of Customs, free.

Materials to be used in Canada for the construction of bridges and tunnels crossing the boundary between the United States and Canada, when similar materials are admitted free under similar circumstances into the United States, under regulations prescribed by the Minister of Customs, free.

It is provided in schedule B that the following drawbacks will be allowed on goods or home consumption: 95% drawback upon flat spring steel, steel billets and steel axle bars when used in the manufacture of springs and axles for vehicles other than railway or tramway vehicles; 95% upon spiral spring steel when used in the manufacture of railway spiral springs.

February Birthdays.

Many happy returns of the day to—

S. A. Baker, Canadian Freight and Passenger Agent, Chicago Great Western Ry., Toronto, born at Morrisburg, Ont., Feb. 1, 1877.

B. H. Bennett, General Agent Chicago and North-Western Ry., Toronto, born at Cobourg, Ont., Feb. 6, 1858.

F. L. C. Bond, Resident Engineer G.T.R., Montreal, born there Feb. 21, 1877.

E. E. Cain, Trainmaster Pere Marquette Rd., Detroit, Mich., born at Dublin, Ind., Feb. 14, 1867.

F. W. Churchill, C.P.R. Ticket Agent, Collingwood, Ont., born in London, Eng., Feb. 6, 1853.

H. R. Charlton, Advertising Agent G.T.R., Montreal, born at St. John's, Que., Feb. 9, 1866.

F. W. Cooper, Resident Engineer C.P.R., London, Ont., born there Feb. 16, 1880.

R. Crawford, Northwest Agent Northern Navigation Co. Winnipeg, Man., born at Kingston, Ont., Feb. 21, 1870.

F. P. Dwyer, Eastern Passenger Agent G.T.R., New York, born at Chicago, Ill., Feb. 20, 1853.

E. A. Evans, General Manager and Chief Engineer Quebec Ry., Light and Power Co., Quebec, born at Kensington, London, Eng., Feb. 26, 1855.

E. H. Fitzhugh, Third Vice-President G.T.R. and Vice-President Central Vermont Ry., Montreal, born in Montgomery County, Mo., Feb. 1, 1853.

C. W. Gardner, Auditor Minneapolis, St. Paul and Sault Ste. Marie Ry., Minneapolis, Minn., born at Rushville, N.Y., Feb. 17, 1861.

L. O. Genest, General Storekeeper, C.P.R. Western Lines, Winnipeg, Man., born at St. Henri, Levis County, Que., Feb. 16, 1856.

W. Jackson, C.P.R. ticket agent, Clinton, Ont., born there Feb. 4, 1860.

R. S. Logan, Assistant to 2nd Vice-President and General Manager G.T.R., Montreal, born at St. Louis, Mo., Feb. 13, 1864.

D. MacPherson, Assistant Chief Engineer Transcontinental Ry. Commission, Ottawa, born at Bath, Ont., Feb. 2, 1858.

C. S. Maharg, Assistant Superintendent C.P.R., Moose Jaw, Sask., born in Dufferin county, Ont., Feb., 1867.

T. McNabb, Master Mechanic Alberta Ry. and Irrigation Co. at Lethbridge, Alta., born in Scotland, Feb. 16, 1849.

C. W. Milestone, ex-Superintendent C.P.R at Moose Jaw, Assa., born at Medina, Ohio, Feb. 24, 1857.

C. Percy, Auditor G.T.R., Montreal, born in Kent, Eng., Feb. 12, 1845.

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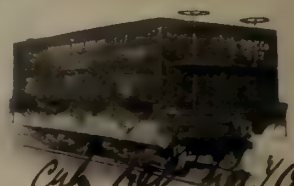

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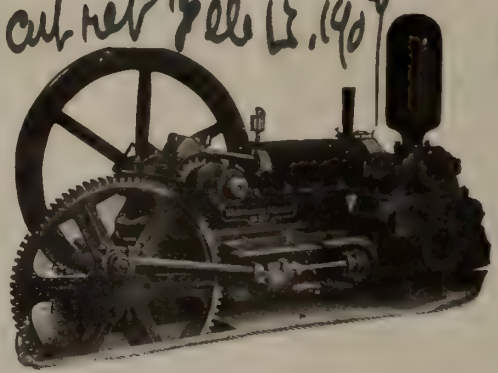

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A. H. Robinson, Superintendent Elgin and Havelock Ry., at Petitcodiac, N.B., born at Elgin, N.B., Feb. 2, 1862.

A. E. Rosevear, Freight Claim Agent G.T.R. at Montreal, born Feb. 20, 1863.

H. H. Schaefer, District Freight Agent Intercolonial Ry., St. John, N.B., born at Cologne, Germany, Feb. 10, 1848.

J. G. Scott, General Manager Quebec and Lake St. John Ry., Quebec, born there Feb. 13, 1847.

G. Spencer, Superintendent C.P.R. North Bay, Ont., born in London, Eng., Feb. 21, 1865.

Hugh Sutherland, Executive Agent Canadian Northern Ry., Winnipeg, Man., born at New London, P.E.I., Feb. 22, 1845.

J. B. Tinning, Travelling Passenger Agent C.P.R. Atlantic S.S. Lines, Toronto, born there Feb. 21, 1866.

J. W. Troup, Superintendent C.P.R. Pacific Coast Steamships, Vancouver, born Feb. 5, 1855.

Sir Wm. C. VanHorne, K.C.M.G., Chairman C.P.R. and President Cuba Co., Montreal, born in Will County, Ill., Feb., 1843.

H. W. Walker, General Auditor G.T.R., Montreal, born at Brantford, Ont., Feb. 12, 1839.

Special Session of Ry. Commissioners.

The Board of Railway Commissioners will hold a session in Ottawa on Feb. 5, to discuss and settle upon a system of operating rules for the various railways subject to the jurisdiction of the Board. The Board will also consider the petition of the railway trainmen of Ontario, dated April 28, 1906, and the representations of employes in relation thereto, as made before the Board on June 15, 1906; and the Board desires to have the contents of such petition and the representations referred to fully discussed and all possible information in respect thereto given.

The Board would like also to have consideration then given to the subjects enumerated below and to receive information in relation thereto: Railway accidents and precautions for preventing the same. Provisions for cleanliness, ventilation and health at passenger stations. Supply of equipment and adoption of methods to insure more prompt and efficient service on railways. Car supply for traffic originating on short local lines for carriage for long distances over other lines. Mechanical appliances and fire-guards for preventing the setting or spreading of fires from locomotive engines, especially on the prairies. Equipment of cars carrying lumber and similar commodities, and rules regulating the same. Width of gates and planking at farm crossings. Forms of orders for railway crossings. Supply of ice at convenient points for the icing of refrigerator cars for shipment, and provision for re-icing the same in transit for export and to the Western provinces. Compliance with sec. 216 of the Railway Act requiring the wearing of badges by railway officials. More careful compliance with sec. 231 of the Railway Act, respecting notices of delayed trains. Compliance with sec. 215 of the Railway Act, requiring trains to be run according to schedule time. Such other subjects connected with the management and operation of railways as it may appear then to those skilled therein desirable to discuss before the Board.

G. H. Phillips, General Freight and Passenger Agent, Ottawa and New York Ry., in renewing his subscription writes: "Your publication contains valuable information put together in convenient form for the reader."

Railway Commissioners' Freight Orders.

2115. Nov. 16, 1906. In the matter of the application of the C.P.R. Co. operating, as lessees, the Columbia and Western Ry., under sec. 25 of the Railway Act, 1903, for an order varying or amending the order of the Board dated Feb. 14, 1906, fixing the rate to be charged for interswitching between the Red Mountain Ry. Co.'s and the Columbia and Western Ry. Co.'s tracks at Rossland, B.C., so as to provide that the point of interchange for traffic between the said tracks be at the junction of the tracks of the said companies at or near Third Ave., Rossland, instead of at the point of interchange known as Transfer Jct., mentioned in the said order; and to fix a reasonable toll to be charged by the Red Mountain Ry. Co. for switching cars containing through freight traffic to and from the connection of the tracks of the Columbia and Western Ry. Co. at or near Third Ave., and from and to all points reached by the Red Mountain Ry. tracks on the Black Bear High Line and Low Line; also points west of the junction of the main line and the Lower Black Bear Line, including the White Bear Mine; the rate at present charged by the Red Mountain Co., viz., that authorized by the Board's order dated Feb. 14, 1906, which fixes the point of interchange at Transfer Jct., being in the opinion of the C.P.R. Co. excessive for the services performed in view of the fact that the interchange is now being made at Third Ave., or for such other order as the Board may in the circumstances deem proper. Upon reading what was alleged in support of the application, and the answer filed on behalf of the Red Mountain Ry. Co., and upon hearing counsel for the companies, the evidence adduced and what was alleged, and upon the report of its chief traffic officer, the Board orders that the point of interchange for traffic between the C.P.R. Co.'s and the Red Mountain Ry. Co.'s tracks be at the junction of their tracks at or near Third Ave., Rossland, instead of at the point of interchange known as Transfer Junction, as provided in the order of Feb. 14, 1906. That the Red Mountain Ry. Co.'s rate for switching cars containing through freight traffic to or from the point of interchange between its tracks and the C.P.R. tracks at or near Third Ave., and from or to all points described in the order of Feb. 14, 1906, be fixed at $3.00 per carload, regardless of weight, no extra charge to be made for the haulage of the empty cars in either direction, instead of $3.50 per carload, as provided in the order of Feb. 14, 1906. That the Red Mountain Ry. Co. refund to the C.P.R. Co. the difference between the rate of $3.00 per carload, as herein provided, and the rate of $3.50 per carload, as provided by the order of Feb. 14, 1906, wherever the latter rate has been charged and collected by the Red Mountain Ry. Co., on cars which have been interchanged at the point of junction at or near Third Ave., as provided in this order.

Intercolonial Ry. Motor Cars.

The Intercolonial Ry. is having built at its Moncton shops, several motor cars for use on its suburban lines. These cars have been designed by G. R. Joughins, Superintendent of Motive Power, from the knowledge gained during a visit to Great Britain and France last fall. In these countries there has been a considerable development of motor car travel on railways, and several types of cars are in service. As a result of his observations Mr. Joughins recommended for adoption by the I.C.R., the type of car in use on the Great Western Ry. of England, and this design has been followed with such modifications as the local conditions in Canada necessitate. The car will have a total length of 66 ft. exclusive of the enclosed platform at the rear end, which will be enclosed, and provided with a cowcatcher and couplings for attaching a second car if necessary. The front end is fitted with cowcatcher, coupling, headlight and bell. It is divided into compartments for boiler and engine, baggage, smoking, general passengers, and lavatories. Entering from the rear platform are two lavatories, 3 ft. 11 in., one on each side of the car; then comes the passenger compartment, 30 ft. 3 in., with seats for 40 persons; next comes the smoking compartment, 9 ft. 1 in., with seats for 12 persons; then the baggage compartment, 8 ft. 4½ in.; and finally the boiler room, 14 ft. This is enclosed in wood, like the body of the car, the smoke stack projecting a little above the roof. Coal bunkers are at front end, one on each side of the car, and the boiler and engines are carried above the centre of the driving wheel truck. The door into the boiler room is 2 ft. 3 in. wide; and there are sliding doors giving connection with the baggage room. This has two doors, one at each side of the car, 3 ft. 8 in. wide. The windows in the passenger sections of the car are 24 in. square. The driving wheels are 42 in. in diameter, and the rear wheels are 36 in. in diameter. There are two water-tanks carried under the central part of the car, having a total capacity of 625 gallons, and there is also a vapor tank. The cylinder has a diameter of 12 in.; with a piston stroke of 16 in.; and the driving wheels have 7 by 16 in. journals. The motor will have a capacity of 200 h.p., and is calculated to haul a trailer, if necessary at a speed of 30 miles an hour, or 10 miles an hour less than if no trailer is attached. Three cars are being built and they are to be completed for the early summer traffic.

Refunds on Passenger Tickets.

The Eastern Canadian Passenger Association has adopted the following regulations: That wholly unused passage tickets, sold in Canada, presented for redemption at the ticket office where sold within 30 days from the date of expiration shall be redeemed forthwith by the agent in charge of said ticket office at the price paid for such ticket. That passage tickets sold in Canada and partly used, shall be received for redemption if presented within 30 days from the expiration of the time for which the ticket was issued in accordance with the conditions thereon, on the basis of the amount paid for the ticket less the regular and ordinary fare for the distance for which such ticket has been used. Tickets bearing "B.C." or gate punch marks must be treated as partly used tickets. That passage tickets presented to agents for redemption more than 30 days after their expiration, shall be forwarded at once to the general passenger department, with full particulars, including the reason why ticket was not presented for redemption within the proper limit. That where the claimant for refund is located in a place at which there is an agent of the transportation company, the claim be paid by an order or draft from the general passenger department to be sent promptly to the agent at such point; notice to be sent by mail to the claimant the day the order or draft is sent to agent, advising him where payment will be made. That where the claimant for refund is located in a place at which there is not an agent of the transportation company, the claim be paid promptly by the general passenger department through the treasury department; notice to be sent by mail to the claimant on the day the order is made by the general passenger department. That the cheque or form of remittance to be used by the treasury depart-

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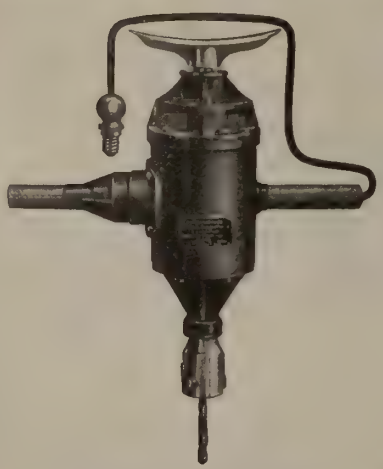

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ment shall be payable at par in the place claimant desires payment to be made, and that the present practice of one or more members in deducting the cost of remittance from the amount of the refund should be discontinued, in all instances the claimant being entitled to the amount of his claim without deductions referred to above. That a receipt be taken in every case where an agent makes refund on a wholly unused ticket, the receipt to show claimant's address. That an acknowledgment be made at once by general passenger department for every claim received direct from claimant, if claim requires investigation and payment cannot be made on the day claim is received. That to ensure prompt payment of all claims any necessary checking by the accountant department should take place after payment has been made, experience having demonstrated that only an infinitesmal number of small errors occur in comparison with the total claims paid.

C.P.R. Betterments, Construction, Etc.

Wiscasset, Me.—A United States press report states that the C.P.R. is interested in a project to extend the Somerset Ry. of Maine into Canada, and to develop the harbor of Wiscasset, Me., in opposition to the G.T.R. port of Portland.

Halifax.—Reports are current in Halifax, N.S., to the effect that the C.P.R. is negotiating for the purchase of several properties in the city with a view of having terminal facilities there.

Quebec Improvements.—The surveys and preliminary work for a number of improvements at Quebec are being made. The improvements planned include the building of a cribwork wharf from Prince Edward St. to the north embankment of the Louise docks, filling in to make new ground for additional tracks, sidings, etc., the building of a freight shed to take the place of the present one, which will be demolished to give additional yard space, and the erection of a new station. The work of demolishing the buildings on the site of the extensions to the Chateau Frontenac has been commenced.

Campbellford to Toronto.—The preliminary surveys for the line between these points which the C.P.R. proposes to construct so as to reach the Lake Shore towns, are practically complete, and F. S. Darling, Division Engineer of Construction, recently stated that it was desired to avoid the Scarboro Heights by connecting with the main line at some point between Leaside Jct. and Locust Hill. As soon as the preliminary surveys had been completed the actual location surveys would be gone on with.

Walkerton and Lucknow Ry.—Grading practically ceased on the line under construction between Proton and Walkerton, Ont., at the end of Dec. Good progress has been made with the work generally. The big fill at the crossing of the Saugeen river, which requires about 65,000 cubic yards, has been about half done. The fencing posts are all set, and the telegraph posts and ties are now being hauled in.

Offices at Chatham, Ont.—The company has leased the I. A. McCall Drug Co.'s store at Chatham, Ont., for 10 years, and will fit it up as a city ticket office.

Surveys at Sarnia, Ont.—Engineers have been working in the vicinity of Sarnia for some time, in the interests, it is stated, of the C.P.R., with the object of securing an entrance of that line to the waterfront. The report also states that it is sought to effect a junction with the Pere Marquette Rd. lines, and a further report is to the effect that negotiations for the purchase by the C.P.R. of the Sarnia Bay mill property for terminal purposes have practically been completed. The manager of this company stated Jan. 6 that although C.P.R. officials had interviewed him on two occasions, there was no truth in the report that the property was about to be sold.

Toronto-Sudbury Line.—Track was laid into Bala on Christmas morning, and it was expected that the rails would be laid into Parry Sound by the end of Jan.

Winnipeg Train Shed.—Work was commenced Jan. 3 by the Dominion Bridge Co., Montreal, upon the erection of a train shed over the six C.P.R. tracks at the new station. The shed will extend from the subway to the eastern end of the station building. It will have a total length of 474 ft 8 in., with a width of 108 ft. 2½ in., and will be 29 ft. 1½ in. from the top of the concrete piers to the roof. The roof will be carried on steel pillars and trusses, and there will be a skylight 37 ft. wide along the centre. On the side of the shed opposite the station building, there will be a covered way for waiting vehicles, etc.

Spur Lines in Winnipeg.—The C.P.R. has given notice of application to the Board of Railway Commissioners for permission to construct a number of spur lines in Winnipeg.

Quill Lakes Branch.—The Board of Railway Commissioners has approved of location plans for the Quill Lakes branch for a distance of 31 miles.

Water Supply at Suffield, Alta.—For the purpose of supplying water for locomotives at Suffield the C.P.R. has had laid 10½ miles of 8 in. high pressure wood pipe. The pipe line is laid at a depth of 8 ft. in order to protect it from the frost. The water will be pumped from the Saskatchewan River. The Pacific Coast Pipe Co., Vancouver, B.C., had the contract.

Cascade Bridge Filling.—In connection with the filling of the big bridge at Cascade, B.C., which will take another year to complete, there was finished at the end of 1906, a cut of about a mile long along the base of the mountain. This cut has always been a source of trouble to the company on account of slides, and its widening will be a considerable betterment to this section of the line.

Bridge at Revelstoke.—Work has been started upon the foundations of the new bridge across the Columbia River at Revelstoke. The foundations are expected to be completed and ready for the erection of the steel superstructure in the spring. The bridge will be at the site of the existing one.

New Westminster Terminals.—Plans for the improvement of the terminal facilities at New Westminster, B.C., are under consideration. It is expected that work will be gone on with during the year.

Esquimalt and Nanaimo Ry.—The terminal facilities in Victoria, B.C., are entirely inadequate for the business being handled, and the question of an extension is understood to be under consideration. The Soughees' reserve is the area into which the extensions are planned, and the Government is being asked to open it up. Plans for improved station buildings and terminals were prepared by J. Hunter, Chief Engineer of the E. and N. Ry., before it was taken over by the C.P.R., and it is stated that these will be utilized. The plans provide high level trackage for passengers and express traffic and a low level for freight. (Jan., pg. 19.)

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Dominion Dump Car Co., Montreal, has issued a handsomely illustrated calendar.

F. H. Hopkins & Co., railway contractors and mining supplies, etc., Montreal, have issued a large wall calendar.

The Locomotive and Machine Co. of Montreal has sold eight steam shovels to the C.P.R., and five to the G.T. Pacific Ry.

Mussens Limited, railway contractors, mining and municipal supplies, etc., Montreal, have issued a large wall calendar.

The Hiram L. Piper Co., Railways and Marine Supplies, etc., Montreal, has issued a handsome calendar, "A String of Trout," for 1907.

J. W. Duntley, President Chicago Pneumatic Tool Co., who returned recently from his 21st trip to Great Britain and the European continent, reports his company's business on the increase at all the points visited. He again sailed for Europe on Jan. 8.

The fifth of the series of pamphlets which is being issued by the American Locomotive Co. has been published. It is devoted to 10-wheel type locomotives weighing less than 150,000 lbs., and will be followed by one presenting the heavier designs of this type. The pamphlet illustrates and describes 21 different designs of 10-wheel locomotives, ranging in weight from 64,000 to 150,000 lbs. and adapted to a variety of road and service conditions. The series now includes pamphlets on the Atlantic, Pacific, consolidation and 10-wheel types, and copies may be had upon request.

The Dominion Car and Foundry Co. has been incorporated under the Dominion Companies' Acts, with a capital of $5,000,000 and offices at Montreal, to manufacture, buy, sell and deal in cars and rolling stock of all kinds and descriptions, and any parts of the same, and all the necessary incidental powers in connection with the purchase and sale of patent rights, the holding of lands and buildings, the purchase of similar businesses, and the financing of the various operations. The provisional directors are: W. V. Kelley, R. P. Lamont, Chicago, Ill.; W. W. Butler, Saratoga Springs, N.Y.; G. McAvity, St. John, N.B.; A. H. Chave, and J. A. Lamont, Montreal.

The Vulcan Iron Works Co., Toledo, Ohio, has, during the past year, materially increased the capacity of its plant. New machines, of the latest and most improved types, have been installed. In fact, every device for facilitating the work in the shops, such as heavy steam hammers, lathes, boring, turning, milling, punching, and shearing machines, besides two large water tube boilers, with a capacity of 200 h.p. each, and a new air compressor, with a capacity of 750 ft., have been added, making this one of the most complete and compact plants in the country for the manufacture of steam shovels. Another very important feature is the completion of an entirely new and separate shop for taking care of the repair work.

The Manitoba Cartage and Warehousing Co., Winnipeg, Man., has been granted supplemental letters patent, increasing its capital from $150,000 to $250,000.

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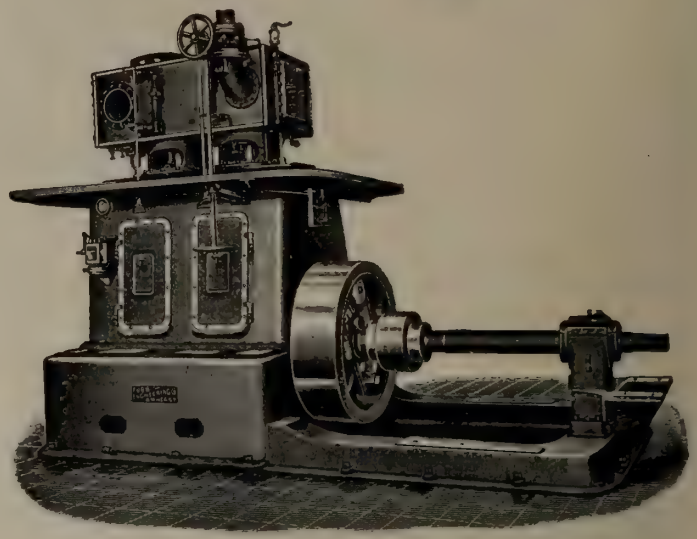

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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Abitibi and Hudson Bay Ry.—The Dominion Parliament is being asked at its current session for an act incorporating a company with this title with power to construct a railway from the National Transcontinental Ry., between Frederick House River and Abitibi Lake, Ont., to James Bay, between Albany River, Ont., and East Main River, Que. Power is also asked to join tracks with the National Transcontinental Ry. and the Temiskaming and Northern Ontario Ry.; to make traffic arrangements with other railways, and with steamboat companies; to construct telephone and telegraph lines; to own and operate steam and other vessels, construct wharves, docks, etc., and to develop electric power. Murphy and Fisher, Ottawa, Ont., are solicitors for the applicants.

Alaska Central Rd.—J. D. Cameron, Engineer of Construction, states that not much was accomplished in actual mileage during 1906, but big headway was made in the amount of work done. Seven tunnels, aggregating more than 4,100 ft., were driven on miles 49 and 52; all the grading and pile driving has been completed to mileage 67; all the right of way has been cleared to mileage 105, and five miles of grading done between mileage 67 and 105. There are ties on hand for 40 miles, rails for 50 miles, and material or five bridges. The heaviest work is now completed, and during the coming season rapid progress will be made. (Dec., 1906, pg. 711.)

Alberta Central Ry.—The Dominion Parliament is being asked at its current session to pass an act extending the time for the commencement and completion of the railway and extension authorized by the company's acts, and authorizing the making of agreements with the G.T. Pacific Ry. and the Canadian Northern Ry. It is also desired to vary the personel of the provisional directors and to change the head office from Toronto to Red Deer, Alta. J. T. Moore, Red Deer, is solicitor for the applicants.

A second application is being made at the current session of the Dominion Parliament for an act extending the time for the construction of the authorized lines; to authorize an extension of the projected line from Content to Medicine Hat, Alta., and to include the Canadian Northern Ry. and the G.T. Pacific Ry. or any other railway among the companies with which it is authorized to make agreements. The application is signed by G. W. Smith, Red Deer, Alta., President.

Alsek and Yukon Ry.—The applicants at the current session of the Dominion Parliament for an act incorporating a company with this title are: J. A. McDougal, J. P. Smith, Dawson, Yukon; F. Jodin, Fairbanks, Alaska; B. L. Allan, New York; and C. E. W. Johnson, Vancouver, B.C. The line as projected will traverse the Yukon territory from the British Columbia to the Alaskan boundary, passing through Dawson. (Nov., 1906, pg. 639.

Atlantic, Quebec and Western Ry.—W. Moffatt, of Scotland, and J. Lavoie, Perce, Que., interviewed the Dominion Premier Jan. 2, with respect to the Dominion subsidy towards the construction of this line, of which 20 miles have already been completed. (Jan., pg. 1).

The Bangor and Aroostook Rd. Co. has been granted authority by the Maine Railway Commission, to construct a line from West Sebois to St. Francis, Me., near the Canadian boundary, 145 miles. The company already has a branch running from Houlton, Me., to Fort Kent, at the Canadian boundary, and the projected branch will be some miles west of this, but the termini of both will be on the U.S. side of the river along the banks of which the St. Francis branch of the Temiscouata Ry. runs. M. Burpee, Houlton, Me., is Chief Engineer.

Beersville Coal and Ry. Co.—The line from Beersville, N.B., to the Imperial Coal Mining Co.'s collieries was re-opened for traffic Jan. 1.

Big Fork and International Falls Rd. Co.—Articles of incorporation have been filed at Minneapolis, Minn., naming E. W. Backus, W. F. Brooks, and C. G. Rockwood, as directors of this company, with the object of constructing a line from the present terminus of the Minnesota and International Rd., to International Falls, on the Rainy River, nearly opposite Fort Frances, Ont. The length of the projected line is about 35 miles, and the cost of the construction and equipment is put at $1,000,000. The promoters of the line are interested in the development of the power plant at the International Falls. (See Minnesota and International Ry., Jan., pg. 34.)

Buffalo and Frontier Terminal Ry.—The new switching road to be constructed in Buffalo, N.Y., under this title will be a double track line, 27½ miles long. The southern terminals will be at Bay View, and the northern terminal at Tonawanda. The proposed route crosses all the lines from the seaboard and from the south shore of Lake Erie. It is understood that at a future date the line will be extended to Black Rock, so as to touch the lines entering Buffalo from Canada.

Cape Breton Coal, Iron and Ry. Co.—It is reported that the shaft at the company mines at Broughton, N.S., has been sunk at the wrong point, and that the $1,000,000 expended in laying out a town, building an hotel, men's houses, etc., has been wasted. At any rate the town has been abandoned for some months, and nothing is being done in the direction of constructing the projected railways. A report from London, Eng., Jan. 7, states that the company has not paid the interest due on its bonds, which are held almost exclusively in England. (Dec., 1906, pg. 711.)

Chibougamou and James Bay Ry.—The Quebec Legislature is being asked at its current session for an act incorporating a company with this title with power to construct a railway commencing at or near Roberval, thence to Chibougamou and Mistassini Lakes; and a line commencing on the north side of the National Transcontinental Ry., following the Bell and Nottaway rivers and reaching James Bay. Martineau, Lemieux and Brassard, Montreal, are attorneys for the applicants.

The Cumberland Ry. and Coal Co.'s freight and passenger station at Parrsboro, N.S., which was burned down Jan. 7, is to be rebuilt at once.

Detroit River Tunnel.—Shaft 1, located nearest the river at Windsor, Ont., has been completed, and the men are engaged in cutting a tunnel to shaft 2, from which another gang is tunnelling towards shaft 1. (Dec., 1906, pg. 711.)

Diamond Coal Co.—The Alberta Legislature at its current session is being asked for an act incorporating a company with this title for the purpose, among other things, of constructing a railway from the company's mines to the Crow's Nest line of the C.P.R.

Gaspesian Ry.—Application is being made at the current session of the Quebec Legislature for an act incorporating a company with this title for the purpose of constructing a railway from Paspebiac, through the county of Bonaventure, not further north than Causapscal, or further south than Cross Point, to the boundary of the Province, in the direction of Edmundston or Grand Falls, N.B., or between those two points on St. John River. Power is also asked to amalgamate with the Atlantic, Quebec and Western Ry., to operate telegraph and telephone lines, and to own and operate steam and other vessels. Martineau, Lemieux and Brassard, Gaspe Basin, Que., are attorneys for the applicants.

Great Northern Ry. (U.S.) Canadian Lines.—Jas. Fisher, K.C., Winnipeg, solicitor for the company's lines in Manitoba, stated Jan. 3, that the line from Gretna on the International boundary to Portage la Prairie, Man., and from St. John, N.D., to Brandon, Man., would be opened for passenger traffic by Jan. 31. A short line from Walhalla, N.D., to Morden, Man., would be completed early in the spring. The right of way from the International boundary to Winnipeg has not yet been purchased. The route map filed with the Government shows a line from Emerson to Winnipeg. (Jan., pg. 3, also see Midland Ry. of Manitoba, Jan., pg. 3, and Brandon, Saskatchewan and Hudson Bay Ry., Dec., 1906, pg. 711.)

Reports from Winnipeg and other points in the west, are to the effect that the Hill project for the construction of a line from Winnipeg to Vancouver, has either been abandoned, or held up for an indefinite period. Also that all that the company will do will be to extend its branch lines into Canadian territory.

Halifax and South-Western Ry.—The first through train from Halifax to Yarmouth, N.S., over the H. and S.W. Ry., reached the latter town Dec. 20, and a regular bi-weekly service between Liverpool and Yarmouth was inaugurated Dec. 22. W. Mackenzie, Toronto, C. W. Spencer, General Manager of the line, and other officials were entertained at dinner at Halifax, in connection with the completion of the line Dec. 21. Mr. Mackenzie spoke of the connecting up of the various sections of the Canadian Northern Ry. lines with the lines in Nova Scotia, and added that the only thing that is left to Halifax is to wait for the Canadian Northern Ry. A new passenger station was a necessity in the city. (Jan., pg. 3.)

Huntsville and Lake of Bays Ry.—The Ontario Legislature will be asked next session for an act constituting C. O. Shaw, S. H. Jacobs, J. McKee, J. J. McNeil, H. F. Chafee, W. J. Moore, J. Whitesides, and A. Marsh, provisional directors in lieu of those mentioned in the act of incorporation, and conferring upon them all the powers of the original company.

Intercolonial Ry.—The contract for the erection of the locomotive shops at Moncton, N.B., has been awarded to E. A. Wallberg, Montreal, at a price of about $500,000. They will be built entirely of concrete and steel. This is the last group of the shop system to be built there. All the others are being built by the same contractor.

A contract has been let to M. E. Keefe & Co., Halifax, N.S., for the erection of a roundhouse and engine house. The new roundhouse will have 36 stalls, and the engine house will adjoin it. The structure will be built of concrete, and the flooring, etc., will also be of concrete. The roundhouse will be 350 ft. across. The turntable in the centre of the building will be 75 ft. wide. The building will be only one story and will have a ventilating roof of reinforced concrete slabs, metal and hard pine, supported throughout the space by piers of concrete. Most of the roof will be 28 ft. in height, but one portion will be somewhat higher than the rest. The engine house

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connected with the roundhouse will be 108 by 157 ft. and will also be of reinforced concrete, and have a ventilating roof. Other buildings to be erected later on the grounds adjacent to the roundhouse include a freight car repair shop 360 by 86 ft., a planing mill 128 by 60 ft., a store house 125 by 80 ft., oil and sand houses, a water tank and a general storehouse, but contracts have not yet been given for these. The railway entrance to the new site of the works will be from the cotton factory siding and the roundhouse will be well up towards the Exhibition grounds. The front will be near Windsor St. (Jan., pg. 3.)

Knee Hill Ry.—Application is being made at the current session of the Alberta Legislature for an act incorporating a company with this title for the purpose of constructing a railway, not exceeding 25 miles long, from the Knee Hill mines to the C.P.R.

Little Nation River Ry.—Application is being made at the current session of the Quebec Legislature for an act incorporating a company with this title for the purpose of constructing a railway from between Thurso and Montebello, on the left bank of the Ottawa River, running northerly to near the line of the C.P.R. in Ottawa county; to operate hotels, to develop electric power, and to sell the same; to acquire steam and other vessels, and to carry on a general navigation business. The persons mentioned in the application are; A. Taillefer, Montebello; Que.; P. de Varennes, A. Chauret, Papineauville, Que.; N. Chenie, Rev. J. P. Belanger, St. Andre Avelin, Que. H. A. Fortier, Hull, Que., is their solicitor.

London and Port Stanley Rd.—The Pere Marquette Rd., which operates the L. and P.S. Ry. under lease, has made an offer to the London City Council, the owners of the line, with respect to the renewal of the bridges. The lessee has notified the city in accordance with the terms of the lease that it requires the bridges over Kettle Creek, and the Thames renewed, and that E. K. Woodward, C.E., had been appointed engineer to represent its interests. The P.M. Rd. offered to provide the funds necessary, to be repaid by the city during the continuance of the lease, the P.M. Rd. paying an additional rental equal to 4½% upon the cost of the work. The city is taking legal advice as to the power of the lessee to call upon the city to renew the bridges. During the past year 15 miles of track were relaid with new 56 lb. rails. (July, 1906, pg. 381.)

Lotbiniere and Megantic Ry.—Application is being made at the current session of the Quebec Legislature for an act extending the time for the construction of the additional lines authorized by the company's acts.

McLeod, Cardston and Montana Ry.—Deputations from Calgary and MacLeod, Alta., are arranging to visit Ottawa, to ask the Government to vote a subsidy for the construction of the projected railway.

Michigan Central Rd.—Practically all the new second track on the M.C.R.'s Canadian line was used for traffic Dec. 31. About 12 miles had not been fully completed, but it was expected that this would be finished by Jan. 31. (Dec., 1906, pg. 713.)

Niagara Peninsula Ry.—Application will be made at the current session of the Ontario Legislature for an act incorporating a company with this title for the purpose of constructing a railway, to be operated by steam, electricity or other motive power, from Port Colborne westerly to Welland. It is also asked that all such other powers as are usually given to railways be conferred upon the company. Rowell, Reid, Wilkie, Wood and Gibson, Toronto, are solicitors for the applicants.

Ontario and Quebec Ry. Ferry Co.—The examiner of petitions of the House of Commons reported that the standing orders had not been complied with in several particulars. The principal non-compliance was in asking for powers not specifically mentioned in the notice, viz., power to operate steamboat lines, and the right to expropriate lands. The question whether the applicants will be allowed to proceed is before the Standing Orders Committee. (See Quebec Ry. Ferry Co., Jan., pg. 5.)

Ottawa River Ry.—The Ontario Legislature will be asked next session for an act extending the time for the construction of the branch lines authorized to be constructed by the company under chap. 103, 1906.

Pontiac Central Ry.—The Quebec Legislature is being asked at its current session for an act incorporating a company with this title with power to construct a railway from Bryson, Que., along the valley of the Coulonge River to a port on James Bay, with such branches as may be required. It is also desired to have power to develop the mineral, timber, agricultural and other resources of the district to be traversed. Ryan and Bickerdike, Montreal, are solicitors for the applicants.

Quebec and Lake Huron Ry.—The Canadian Gazette states that the Quebec and Lake Huron Construction Co. was registered in England on Dec. 18, with a capital of £100,000, to adopt an agreement with Steele, Lockhart and Co. to construct, equip, work, and maintain the railway from Lake Huron to Quebec authorized by the Dominion Parliament. (Aug., 1906, pg. 455.)

Quebec and Oriental Ry.—The application for an extension of time for the construction of this projected railway, is under consideration at the current session of the Dominion Parliament. The offices of the company are at Montreal, but the shareholders all reside at or near Rimouski, Que., and in giving notice of the application the necessary advertising was not done in Montreal at the same time as it was done at Rimouski. The Standing Orders Committee has the technical point under consideration.

Quebec to Lake Champlain.—Application is being made at the current session of the Quebec Legislature for an act incorporating "The Railway Company from Quebec to Lake Champlain," for the purpose of building and working a railway between these two points. J. C. Langlier, Quebec, is attorney for the applicants.

Reid Newfoundland Co.—A new station building has been completed at Killigrew, Nfld., and was opened for business at the end of Dec.

Saskatchewan Central Ry.—Application will be made next session of the Saskatchewan Legislature for an act authorizing it to construct the following additional lines of railway: from the eastern boundary of the province south of the northern boundary of tp. 11, to the western boundary of the province south of the northern boundary of tp. 11; from the projected main line west of range 23, west 2nd meridian, northerly and northwesterly to Goose Lake, thence northerly to Big River between ranges 9 and 12 west of the 3rd meridian; from near Goose Lake westerly to the western boundary of the province; branch lines from any point on the first mentioned line to any town on the C.P.R. main line, and to the southern boundary of the province.

Sherbrooke to Quebec.—Application is being made at the current session of the Quebec Legislature for an act incorporating a company with power to construct a railway from Sherbrooke to the city of Quebec, with all the necessary and incidental powers. The persons named in the application are: F. McCrea, timber merchant, Sherbrooke, Que.; J. A. Begin, notary, Windsor Mills, Que.; E. W. Tobin, lumber merchant, Bromptonville, Que.; E. Hunt, broker, Quebec city, several of whom are connected with the Lotbiniere and Megantic Ry.

Somerset Ry.—Application has been made to the Maine Legislature by the Somerset Ry., to construct a line from Birch Point, Me., to the Canadian boundary. The line, which has a junction with the C.P.R. near Moosehead Lake, Me., was extended to Birch Point two years ago. Its total length is 60 miles, and the extension now asked for is 130 miles.

St. Maurice Valley Ry.—The line from Three Rivers to Shawinigan Falls, Que., was placed in operation Dec. 29, two trains a day in each direction being run. The time table issued is signed by V. Burrill, President, and W. H. Potter, Trainmaster. The line has a total length of 22 miles, and the construction has been fairly heavy. It includes two large bridges, one a cantilever 135 ft. high, with two spans 165 ft. each, and approaches at Shawinigan Falls, and one at Les Gres, consisting of seven 60 ft. steel girders, two 128 ft. truss spans and one big span of 240 ft. (Jan., pg. 5.)

Temiskaming and Northern Ontario Ry.—The Ontario Government has passed an Order-in-Council authorizing the Commissioners to extend the line to a junction with the National Transcontinental Ry. at or near the junction of the Black and Abitibi rivers. This is about 47 miles north of the end of the present contract. The construction of this extension will give the line a total length of about 250 miles. The commissioners will receive tenders up to Feb. 13 for the construction of this additional mileage. (Jan., pg. 7.)

Tenders are being asked for the construction of an office building at North Bay, Ont., which is estimated to cost about $30,000. The Commissioners have under consideration a proposal to construct branch lines to the Larder Lake and Portage Bay or Mud Lake districts. The first named branch will be about 16 miles long, and will run from Englehart; the Portage Bay branch will run from Gillies Depot or Cobalt, for a distance of about five miles.

Thurlow Ry.—Application will be made at the current session of the Ontario Legislature for an act incorporating a company with this title with power to construct a railway from a junction with the G.T.R. in Thurlow tp., at or about lot 22 or 23, con. 1, southerly to the Bay of Quinte. H. H. Macrae, Toronto, is solicitor for the applicants.

Vancouver, Westminster and Yukon Ry.—The New Westminster, B.C., City Council has under consideration a proposal to offer 50 acres of land on Lulu Island for car shops, or other purposes in connection with the line. The land has about 2,000 ft. water frontage at the North Arm of the Fraser River. (Jan., pg. 7.)

Winnipeg and Fort Alexander Ry.—Application is being made at the current session of the Manitoba Legislature for an act extending the time mentioned for the completion of all roads, adding to the powers contained in the act, and making such other amendments as may be deemed necessary and proper. J. T. Haig, Winnipeg, is solicitor for the applicants. The W. and F.A. Ry. was incorporated in 1898, for the purpose of constructing a railway from the C.P.R. between Beausejour and Darwin stations, northerly by way of Lac du Bonnet to the head of lake navigation near the mouth of the Winnipeg River. The provisional directors named in the act are:

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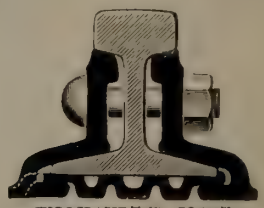
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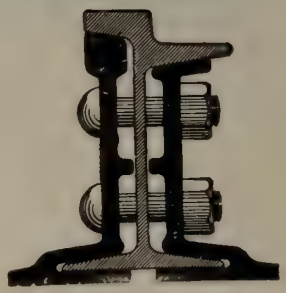
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W. A. Ducker, J. S. Gray, R. R. Scott, W. M. McLeod, J. McDiarmid, and A. N. McPherson, of Winnipeg.

York and Carleton Ry.—The contractors for the extension from Glippen Glen to Ryan's Brook, N.B., one mile, is J. A. Young, Taymouth, N.B. The work will be completed this season. (Jan., pg. 7.)

The C.P.R. has moved its district freight office at London, Ont., from the passenger station to the Bank of Commerce Building.

The Board of Railway Commissioners has decided to make an investigation into the charges of telephone and express companies, and G. F. Shepley, K.C., Toronto, has been appointed counsel to conduct the enquiry. The investigation will be a public one.

The C.P.R. has filed with the Board of Railway Commissioners the following standard passenger tariffs: Between Guelph and Goderich, Ont., 3c. per mile; between Lacombe and Stettler, Alta., and between Wetaskiwin and Hardesty, Alta., 3½c. per mile; between Spence's Bridge and Nicola, B.C., 4c. per mile.

Railway Rolling Stock Notes.

The Canadian Northern Ry. has ordered 20 30-ton refrigerator cars from Rhodes, Curry & Co., for June delivery.

The Canadian Northern Ry. is building a business car at its Winnipeg shops for Superintendent Cameron.

The Canada Car Co. has received orders for 100 Hart-convertible ballast cars to be built for the patentees, the Dominion Dump Car Co.

The Canadian Locomotive Co., Kingston, Ont., has delivered one switching and five consolidation locomotives to the Intercolonial Ry.

Rhodes, Curry & Co., Amherst, N.S., has delivered four first-class passenger cars, two mail and express cars, and one caboose to the Canadian Northern Ry.

The Canadian Northern Ry. has received a snow plow from Rhodes, Curry & Co., and the Canadian Northern Ontario Ry. has also received one from the same builders.

The Dominion Dump Car Co., Montreal, has sold to MacDonell & O'Brien, who have a contract on the Eastern Division of the Transcontinental Ry., 10 additional Hart-convertible ballast cars, 34 ft. long and 9 ft. wide, outside measurement, 80,000 lbs. capacity, and similar in design to those sold to the G. T. Pacific Ry.

The C.P.R., between Dec. 14, 1906, and Jan. 14, received the following rolling stock: three passenger and freight locomotives from the Locomotive and Machine Co. of Montreal; five switching locomotives, 13 first-class cars, 476 box cars, five snow ploughs and nine flangers from its Angus, Montreal, shops, and 20 vans from its Farnham, Que., shops.

The Canadian Northern Ry. and allied lines received the following rolling stock between Nov. 15 and Jan. 15: 2 passenger cars, 1 refrigerator car, 398 box cars and 2 snow plows from Rhodes, Curry & Co., Amherst, N.S.; 4 first-class cars, 2 mail and express cars, 1 caboose, 24 box cars from Crossen Car Mfg., Co., Cobourg, Ont.; 1 locomotive and 1 switching locomotive from Canada Foundry Co., Toronto; 2 box cars from Canada Car Co.

The C.P.R., between Dec. 14, 1906, and Jan. 14, placed orders for the following rolling stock: 20 passenger and freight locomotives and 15 freight locomotives with the Locomotive and Machine Co. of Montreal; 25 freight locomotives with the American Locomotive Co.; 25 passenger and freight locomotives with the Baldwin Locomotive Works; 10 passenger locomotives, 25 first-class cars, 15 mail and express cars, 128 box cars, 90 flat cars and 30 stock cars with its Angus, Montreal, shops.

The Canadian Northern Ry. and its allied lines, the Canadian Northern Ontario, the Canadian Northern Quebec, the Halifax and Southwestern and the Inverness and Richmond railways have the following rolling stock under order for delivery during the current year: 10 ten-wheel and 15 consolidation locomotives, Locomotive and Machine Co. of Montreal; 15 ten-wheel and 15 consolidation locomotives, Canadian Locomotive Co.; 15 ten-wheel and 25 consolidation locomotives, Canada Foundry Co.; 12 passenger cars, 6 baggage cars, 6 mail and express cars, Rhodes, Curry & Co.; 16 passenger cars, 4 baggage cars, 4 mail and express cars, Crossen Car Manufacturing Co.; 4 passenger cars, 2 parlor cars, 3 sleeping cars, 2 dining cars, being built in the U.S.; 1,500 box cars, Rhodes, Curry & Co.; 100 flat cars, 200 stock cars, 15 cabooses, Crossen Car Mfg. Co.; 200 Hart convertible cars, Dominion Dump Car Co.

The G.T.R. has received from the Locomotive and Machine Co. of Montreal a Walscheart gear cross-compound piston valve locomotive, of which an illustration is given on this page. The leading dimensions are:

CYLINDERS.—Type, piston valve, Richmond compound; diameter, 22½ and 35 in.; stroke, 32 in.

TRACTIVE POWER.—34,500.

WHEEL BASE.—Driving and rigid, 17 ft.; total, 25 ft. 9 in.; engine and tender, 57 ft. 3½ in.

WEIGHT.—In working order, 206,350 lbs.; on drivers, 180,110 lbs.; engine and tender, 350,850 lbs.

LOCOMOTIVE BUILT FOR THE GRAND TRUNK RAILWAY BY THE LOCOMOTIVE AND MACHINE COMPANY OF MONTREAL.

HEATING SURFACE.—Tubes, 2,757.1 sq. ft.; fire box, 168.2 sq. ft.; total, 2,925.3 sq. ft.; grate area, 50.62 sq. ft.

AXLES.—Journals, main, 9½ by 12 in.; others, 9 by 12 in.; engine truck journals, 6½ by 12 in.; tender, 5½ by 10 in.

BOILER.—Type, extension wagon top; outside diameter, first ring, 68⅜ in.; working pressure, 210 lbs.

FIREBOX.—Type, wide; length, 96½ in.; width, 75¼ in.; thickness of crown, ⅜ in.; tube, ½ in.; sides, ⅜ in.; back, ⅜ in.; water space—front, 5½ in.; back and sides, 4½ in. Crown staying, radial.

TUBES.—Material, steel; number, 358; diameter, 2 in.; length, 15 ft.; gauge, 11, B.W.G.

BOXES.—Cast steel.

BRAKES.—Westinghouse, American for engine; Westinghouse for tender; Westinghouse air signal; pump, 18 in. L.H.; reservoir, 1-24½ in. by 140. in.

TRUCKS.—Engine, radial swing centre bearing.

EXHAUST PIPE.—Single.

GRATE.—Style, rocking.

PISTON ROD.—Diameter, 3¾ in.; packing, cast iron rings.

SMOKE STACK.—Diameter, 16 by 19 in.; top above rail, 14 ft. 11 15-16 in.

TENDER.—Frame, 13 in. steel channels; style, U shape, level top; capacity, 7,000 galls. water and 12 tons coal.

VALVES.—Type, piston; travel 5½ in. high pressure, 6 in. low pressure; steamlap, ⅞ in. low pressure, 1 in. high pressure; ex C.L., 5-16 in. high pressure, ¼ in. low pressure; setting—lead of h.p. valve, 3-16 and low pressure, 5-16 in.; equipped with Walschaert valve gear.

WHEELS.—Diameter driving wheel, outside tire, 63 in.; diameter centres, 56 in.; materials, cast steel for main wheels, cast iron for others; engine truck wheels, 31 in. diameter, steel tired with cast iron spoke centres; tender, wheels, 34 in. diameter, steel tired with cast iron plate centres.

The Pine Ridge Sand Co. has been incorporated under the Manitoba Companies' Acts, with a capital of $50,000 and offices at Winnipeg, Man., with power among other things to construct tramways, electric roads, railway switches or sidings, telegraph and telephone lines, or other work of a similar nature in connection with its business.

The O'Boyle Bros. Construction Co. has been incorporated under the Ontario Companies' Acts, with a capital of $100,000 and offices at Sault Ste. Marie, Ont., to carry on a dredging and general contracting business; to build, acquire, own, or operate vessels, ships, wharves, docks, houses or structures; to do a general railroad contracting business, both in construction and equipment, and to trade in goods and property of every description. The provisional directors are: J. and D. P. O'Boyle, J. J. McFadden, J. H. MacCaul, W. O'Brien, J. B. Pardee, Sault Ste. Marie, Ont.

The Quebec Cartage and Transfer Co. has been incorporated under the Dominion Companies' Acts, with a capital of $150,000 and offices at Quebec, Que., for the purpose of collecting, receiving, transferring and forwarding baggage, luggage, grain, goods, wares, produce and merchandise, valuables and all articles of commerce and other effects, and to convey passengers to and from any place in Canada; and to carry on allied businesses. The provisional directors are: Hon. E. B. Garneau, Hon. R. Turner, Hon. A. Turgeon, J. Hone, Jr., C.P.R. City Passenger Agent, Quebec; J. H. Walsh, General Manager Quebec Central Ry., Sherbrooke, Que.; R. Forget, Montreal.

The University of Wisconsin has ordered for its library a complete set of THE RAILWAY AND SHIPPING WORLD from 1898 to 1905, both inclusive, and of THE RAILWAY AND MARINE WORLD for 1906. This is striking evidence of the way in which our publication is valued.

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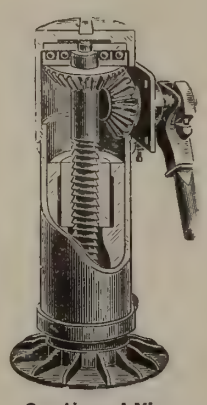
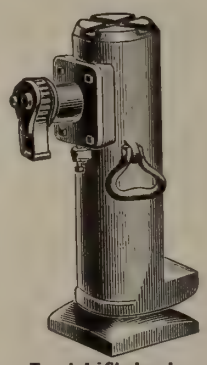


Sectional View



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Traversing Jack

Journal Jack

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A. O. NORTON, COATICOOK, QUE.

Stock Carried by MUSSENS LIMITED, MONTREAL

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct..	815,100	490,000	325,100	66,000+
Nov..	741,700	481,300	260,400	35,300+
	$3,379,900	$2,190,700	$1,189,200	$ 341,500+

Average mileage in operation 2,438, against 1,879 during same period 1905.

Approximate earnings for Dec., $536,200, against $437,800 for Dec., 1905.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug. 6	170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept. 6	152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct.	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122.94	98,188.05—
	$31,472,376.00	$19,152,103.64	$12,320,272.36	$2,479,456 57+

Approximate earnings for Dec., $5,931,000, against $5,568,000 for Dec., 1905.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Nov., $255,581.32; net earnings, $72,397.70, against $249,241.63 gross and $83,034.71 net for Nov., 1905. Net earning for five months ended Nov. 30, $500,278,45 against $479,944.94 for same period, 1905. Approximate earnings for Dec., $251,276, against $213,548 for Dec., 1905.

MINERAL RANGE RY.—Approximate earnings for Dec. $64,967 against $59,104 for Dec., 1905.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Nov., $1,099,866.54; net earnings, $514,414.86; against $1,149,648.59 gross and $687,873.25 net for Nov., 1905. Net earnings for five months ended Nov. 30, $3,024,573.64, against $3,009,159 30 for same period 1905. Approximate earnings for Dec. $862,081 against $931,739 for Dec., 1905.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for Nov. as compared with Nov., 1905.

GRAND TRUNK RAILWAY.

	1906	1905
Earnings	$2,816,000	$2,643,000
Expenses	2,097,990	1,873,194
Net earnings	$ 718,010	$ 770,497

CANADA ATLANTIC RAILWAY.

Earnings	$ 191.878	$ 190,681
Expenses	179,729	159.473
Net earnings	$ 12,149	$ 31 208

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 511,350	$ 474.338
Expenses	402 749	368.172
Net earnings	$ 109,601	$ 106,166

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 142.334	$ 137,369
Expenses	106.566	106,555
Net earnings	$ 36.768	$ 30.814

Approximate earnings for Dec., $3,691,371, against $3,401,472 for Dec., 1905.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from July 1 to Dec. 30.

	1906.	1905.	Increase.	Decrease.
Grand Trunk	£3,594,186	£3,293,305	£300,881	....
Canada Atlantic	225,042	218,324	6,718	...
G. T. Western	638,628	584.464	54,164	...
D. G. H. & M.	196,081	166,786	29,295	....
Total.....	£4,653,937	£4,262,879	£391,058	....

The Board of Railway Commissioners held a session at Winnipeg, Jan. 14 and following days, for the consideration of Manitoba and other western cases.

The action of S. A. Stephens for $30,000 against the American Locomotive Co., has been dismissed, by the Quebec Courts, on the ground that the contract was made in the U.S., and that the company had no property in Canada at the time action was instituted.

New Union Station for Toronto.

The plans show that the proposed passenger station building, including baggage buildings and service plant, are to be erected on the south side of Front St. between York St. and Bay St., and will occupy the entire front between these streets. The existing express building west of York St. will be retained for the Canadian Express Co.'s service, and a new building, of similar dimensions, and with the same general relation to the passenger building, will be erected east of Bay St. for the Dominion Express Co. The northerly line of the passenger buildings is to be generally 65 ft. from the south line of Front St., leaving a plaza of this width for carriage and foot walk purposes.

The station building is generally 100 ft. wide, and between the building and the tracks there is a concourse 90 ft. wide for the general circulation of passengers.

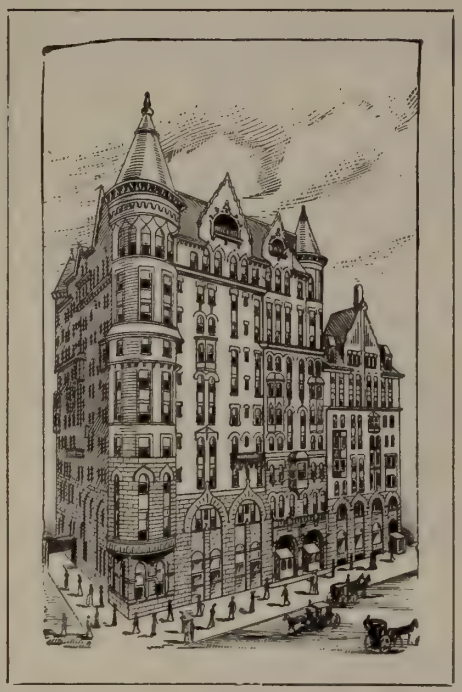
The track layout consists of nine through tracks and two stub tracks, so arranged that there are five platforms for passengers and two platforms for the exclusive trucking of baggage and express matter. The station tracks are connected up at each end with an interlocking switching system, so that they properly join the four main tracks on the east and the two main tracks on the west, generally with double track loads, to give the greatest facility to the train movements. The passenger platforms are designed to be 1,400 ft. long, though this may be increased if found necessary, this distance being sufficient for the longest trains. They are about 20 ft. in width throughout. The new tracks at a point opposite the centre of the station will be 4 ft. higher than the present tracks, and the platforms are designed to be 8 inches above the top of the rail. This leaves a difference of about 5 ft. vertical between the grade of the platforms and the grade of Front St., which difference is overcome by three steps at the waiting-room entrance and inclined surfaces transversely on the concourse between the tracks and the station, and the plaza between the station and Front St. None of the inclined surfaces exceed a slope of three-eighths of an inch per foot. The passages for exit are without any steps whatever. By this arrangement the station and platforms are, in effect, level with the street, a condition which permits of the best possible treatment of any type of station. In order to bring about this condition it has been found necessary to provide for the removal of the York St. overhead bridge, and to substitute in lieu thereof an overhead bridge just east of Bay St. It is also suggested that this bridge easterly of Bay St. can be made to take care of the traffic at the Yonge St. grade crossing, so that the necessity of a bridge at the latter street can be avoided. Foot bridges at any necessary point of crossing can be constructed without interfering with the raising of the tracks. In order that it may not be necessary for any passenger to go upon any track at grade and to make this station absolutely safe and fully up to modern methods and requirements a subway 50 ft. wide is provided, opposite the centre of the station, so that any platform may be reached by means of easy stairways with landings, the total height of stairways for this purpose being about 10 ft. This method allows all trains to come to a stop directly opposite the centre of the station, thus making the least distance for passengers to walk to and from the station and trains.

The baggage and express trucks are to be kept as much as possible on special trucking platforms, 10 ft. wide, which extend the whole length of the station and lie adjacent to four out of the nine through tracks, upon which four tracks it is intended that trains having the bulk of express and baggage matter will be run. The baggage and express trucks cross the track area by subways beneath the tracks, and lead to the basement of the baggage and express buildings. The trucks will be raised and lowered between the subways and the platforms by means of electric lifts. There are three of these cross subways. One leading to the baggage room, one to the express building at the easterly end, and one to the express building at the westerly end of the station.

It is intended that a trainshed roof will be provided to cover the main portion of the platforms and the concourse. This shed will be 800 by 315 ft., covering about six acres. The main structure will be in three spans, and there will be a connecting roof between the trainshed and the station buildings. This roof will be a steel structure and will be well lighted and ventilated. At each end of the station concourse there are spaces for a carriage court for the accommodation of cabs, carriages and baggage transfer waggons, so that it will not be necessary to pass through the station building to get a carriage. At the extreme east end of the station a service building is provided for supplying all heat, light, steam, hot water, compressed air, refrigeration, etc., for the use of the station building and train purposes.

The general layout of the station yards and grounds, including the approach tracks, does not interfere in any way with the present freight yards of either railway.

The station building is planned primarily with a view to convenience and spaciousness and consists of a main central building with two service wings. In the main building on a level with the tracks is located the general waiting room, containing 17,242 sq. ft., which is 5,000 sq. ft. larger in area than the Grand Central Station in New York, or the present station in Toronto. Access to the waiting-room is obtained directly by three spacious openings, containing nine doors each directly from the plaza on Front St. Egress to the trains is obtained by three similar openings containing each nine doors leading to the concourse. Ticket, telegraph, and telephone booth, information bureau, news stands, ample parcel room, and other conveniences are provided along the four sides of the waiting-room, where they are easily accessible and visible. A broad passage at the east end leads directly to the baggage-room, which is located in the east service wing. The capacity of this room, including the basement and first floor, is 28,000 sq. ft., or 15,000 sq. ft. larger than the present baggage-room, and 6,000 sq. ft. larger than the baggage-room at the Grand Central Station, New York, which is one of the largest in the U.S. A similar passage at the west end of the waiting-room leads directly to the west service wing, in which are located waiting-rooms for men and women, each provided with ample toilet accommodations, the women having in addition retiring rooms. Barber shop, bootblacks and other conveniences, as well as a well-equipped, spacious lunch counter, are likewise provided in this section of building. Spacious passages running north and south are placed at each end of the waiting-room, between the waiting-room and the baggage-room on the east, and between the waiting-room and service just mentioned on the west. These passages are intended mainly for exits, so that the travelling public in arriving will pass through and out without crossing the waiting-room. Passengers departing can enter by the easterly passage, check their baggage and buy their tickets without confusion or delay. Carriage courts both east and west of the main building are avail-



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able for cab service, the east court being likewise available for transfer companies and baggage service. The main waiting-room as planned cannot conveniently be used as a thoroughfare, which will increase its efficiency and comfort. This room extends to a height of three stories, and is lighted by 14 very large windows, seven on the north and seven on the south. A gallery extends on all four sides of the same at the height of the second story of the service wings, the north gallery giving access to a series of spacious offices for the use of the employes directly in charge of the station traffic. On this floor and in the west wing is provided a spacious dining-room, serving rooms, kitchen and all accessories. In the east wing is a large hall for the segregation and handling of immigrants, with retiring rooms and toilet rooms for both sexes, and ample accommodations for the officers in charge of this service. In the story extending over the entire waiting-room and in the top of third story of the service wings accommodation about 6,000 sq. ft. in excess of those existing in the union station are provided for the offices of both railway companies. Two staircases, each with two elevators, are provided, one at the east and the other at the west end of the main waiting-room, giving access to the galleries, offices and other service.

The architectural treatment of the exterior is designed with a view of obtaining a monumental effect in a simple, dignified and reposeful manner; of expressing clearly on the exterior the function of each part of the building on the interior; thus, the main waiting-room is clearly suggested by the large windows and the solid basement treatment, the wings indicating clearly the subordinate function which they have to perform; so likewise the baggage and service buildings. The treatment will be maintained on the interior of the building on the same lines. The style of architecture is classic, and though inspired as to detail from the fine examples of the eighteenth century, is treated so as to be distinctly modern in its expression, and to clearly indicate the purpose of the building as a whole, and of each part of the building as well. It is intended to build the exterior of some light stone.

Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.—Net earnings from all sources exclusive of land sales, for Nov., $3,654, making for five months ended Nov. 30, $15,378.

Atlantic and Lake Superior Ry.—In the action brought by Galindez Bros., London, Eng., to recover money advanced on bonds, and arrears of interest, the company has admitted liability for $330,000, and judgment has been entered for the amount. The case has been before the courts on several issues, for the last three or four years.

A notice signed by E. N. Armstrong, Secretary, has been issued calling a meeting of shareholders to be held at Montreal Feb. 9, for the purpose of electing directors and the transaction of other business.

Dominion Atlantic Ry.—Gross earnings for Nov., $95,200, against $90,795 for Nov., 1905. Total for 11 months ended Nov. 30, $1,123,306, against $989,033 for same period 1905.

Canada Atlantic Ry.—A meeting of shareholders has been called to be held at Ottawa Feb. 7, for the purpose of approving an agreement entered into between the company and the Pembroke Southern Ry. Co., S. R. Poulin, et al. authorizing the directors of the C.A. Ry. to guarantee the payment of the principal and interest of the first mortgage bonds to be issued by the P.S. Ry. Co.

Great Northern Ry. (U.S.)—An action has been commenced in Ramsey county, Minn., on behalf of the State against the G.N. Ry., asking for a permanent injunction against the company, its officials, agents and servants from proceeding with the proposed issue of capital stock recently authorized by the directors. It is claimed that the G. N. Ry. is a Minnesota corporation, and bound by law to obtain the consent of the Railway and Warehouse Commission before increasing its capital stock, which has not been done.

Intercolonial Ry.—The gross earnings during Nov. are reported to have been $674,353, against $615,859 for Nov., 1905. From July 1 to Dec. 22, the increase in gross revenue over the corresponding period of 1905 is reported to have been $534,594

The Joliette and Brandon Ry. Co. was incorporated by the Quebec Legislature in 1905 for the purpose of owning and operating the line heretofore known as the Montreal and Lake Maskinonge Ry., about 15 miles in length. By the act which the Dominion Parliament is being asked to pass at its current session, the railway is declared to be a work for the general advantage of Canada; it is authorized to issue bonds to the extent of $20,000 a mile, and the lease to the C.P.R. dated Oct. 31, 1906, is confirmed.

London and Port Stanley Ry.—At the annual meeting in London, Ont., Dec. 28, Mayor Judd, President, presented a report showing what had been done during the year, and referring to the rejection of the offer of the Pere Marquette Rd. Co. for an extension of the lease. The financial report showed the receipts to have been $21,185.81, made up as follows: Rental for 12 months ended Sept. 30, $10,000; interest on rental for same period, $2,596.60; percentage, $8,589.21.

New Brunswick Southern Ry.—Petitions are being signed in St. George, N.B., and other places asking the Dominion Government to acquire the N.B.S. Ry. from the trustees of the Russell Sage estate and amalgamate it with the I.C.R. The St. John Board of Trade passed a resolution Jan. 8 endorsing a memorial to the Government favoring the purchase of the line.

Pere Marquette Rd.—A New York despatch of Jan. 9 says that the tangle in the affairs of the P.M. Rd. and the Cincinnati, Hamilton and Dayton Rd., is being straightened out, and that the receivership will be withdrawn at an early date. It is stated that the two companies will be operated entirely separate, properly financed and placed under new management. The question of the future management of the P.M. Rd. will be with the preferred stockholders' protective committee, which comprises N. Thayer, W. W. Crapo, M .T. Cox, G. H. Norman and F. R. Hart.

The Phillipsburg Ry. and Quarry Co. is applying at the current session of the Quebec Legislature for an act confirming and ratifying the issue of stock made by the company, defining and enlarging its powers, and authorizing it to sell, lease or otherwise dispose of its railway and other property and assets in whole or in part.

Quebec Southern Ry.—The action brought by H. A. Hodge to have the sale of the three railways formerly operated as the Q.S. Ry. to Senator Beique, acting for the Delaware and Hudson Co., set aside, has been dismissed, the court holding that it had no superintending, revisory or appellate jurisdiction in respect of the proceedings and decrees of the Excehquer Court, which directed and approved of the sale under the terms of a special statute. Furthermore, the sale had been confirmed by the Superior Courts, and another action to have the sale set aside had also been dismissed.

Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.—By an act which the Dominion Parliament is being asked to pass at its current session, a mortgage of the line and its assets is confirmed, as also is an agreement with the Canadian Northern Ry. It is also provided that the company has had the power to get in the whole or part of its bond or debenture issues, and may apply the same or portions of the same in the retirement by purchase or otherwise of other securities of the company. The new securities to be issued when all existing securities have been got in and cancelled, shall apply to existing and future property of the company.

Temisconata Ry.—Traffic receipts for Dec., $12,082.22, against $10,021.84 for Dec., 1905.

Temiskaming and Northern Ontario Ry.—Receipts for Oct., $52,828.91; expenditure, $38,268.77; net earnings, $14,560.14 against $32,623.10 receipts, $16,056.59 expenditure, and $16,566.51 net for Oct., 1905. Net earnings for ten months ended Oct. 31, $159,071.79, against $87,909.16 for same period, 1905. Mileage operated Oct., 1906, 138, against 113 in Oct., 1905

The total cost of the line and its equipment, including the extension to Abitibi River, contracts for which will be let in Feb., is put at $12,000,000.

Toronto, Hamilton and Buffalo Ry.—Earnings for Dec., $66,272.59, against $68,456.10 for Dec., 1905.

Mr. Emmerson at St. John, N.B.

Speaking at a banquet at St. John, N.B., Dec. 28, the Minister of Railways and Canals, in referring to development, said chief in importance of the questions pressing for attention was that of transportation, and the vital interests of St. John were connected with it. Probably they had read the statement that there would be expended in Canada during the next twelve months in the construction of railways some $62,000,000, which sum, however, did not include the cost of the construction of the G.T. Pacific Ry. from Winnipeg to Moncton. This expansion must attract to the country large numbers of people with an inevitable increase of business opportunities. The great prairies of the West will produce additional millions of bushels of wheat which must find its way to the seaboard for shipment. It was the policy of the Government that this grain should be brought over railways within Canadian territory for shipment through Canadian ports. One of the great railway men of Canada said when discussing the question, "Produce enough for one port." There will be produce enough in Canada for many ports. Some people had argued that St. John as a port must suffer loss, but he did not think so. St. John would, of necessity, command the major portion of the great export trade of the West. But there were other ports which would receive a share of the trade. It was a fact, acknowledged by the representatives in parliament from all sections of the country, that no people in Canada had made greater sacrifices than had the people of St. John for the development of their port. They deserved aid from the Government, and that aid would be freely given. Personally, whatever influence he had at Ottawa would always be exercised for St. John. This brought him to the railway branch of the question. It is to the interest of St. John that the Intercolonial Ry. should prosper. The day will come when the I.C.R. will prove itself, not a burden to the country, but a source of profit. Even now it is a self-sustaining proposition, and that notwithstanding the

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fact that the three most profitable months of the year are not included in the nine months for which the accounts are made up. Not only is it self-sustaining, but it will have quite a sum to its credit. He would venture to predict that its surplus for the next year will not be far short of $500,000. When that time does come hostile interests will say if it can show a surplus how much better it would be if its branches showed in all directions? These branches have been subsidized, but are not performing their mission. The representative in parliament of the C.P.R. stands up and says the I.C.R. capital account should be closed. Has the C.P.R. closed its capital account? On the contrary it has appeared before parliament several times in recent years asking for power to increase its capital on one occasion by $20,000,000. The I.C.R. requires new rolling stock, ties have to be renewed and rails changed, the same as any other road. The branch roads cannot fulfil their functions because they have no credit, and their capital is exhausted. These conditions show the necessity of taking steps whereby the people can get the full fruition of the expenditures. In answer to the criticism that too much is charged on the I.C.R. to capital account, he might say that neither under his administration of the department or that of Mr. Blair, has there been one dollar charged to capital account for ballasting.

It is in the interests of St. John to see the I.C.R. expand in these different directions. By branch lines the different sections of the province are brought together. Anything that strikes at the I.C.R. strikes at the interests of St. John.

He would tell them plainly that he would never favor the carrying of the products of the West over any line to the exclusion of the I.C.R. Formerly the I.C.R. was discriminated against by steamship companies who would refuse to sell a through ticket which would enable one to travel over the I.C.R. if they wished. To subsidize steamers that will work against the great national road, is not in the interests of Canada. He would not injure any other steamship or railroad company. He did, however, claim that the I.C.R. should participate in some of these expenditures.

He might say that he had worked for the promotion of the interest of the port of St. John. It may be that eventually this great trade from the West will seek an outlet at other ports as well, but it is with the present conditions that we are now concerned. The solution of these problems must be proceeded with before the broader and greater question of nationalization. Those who have read the report of the Transportation Commission must have been struck with the recommendation that the port of St. John should be made free. While not arguing against the nationalization of the Atlantic ports and the ports of the St. Lawrence and the Great Lakes, there are weighty questions to be considered. Many of the ports have great debts, which would have to be assumed by the people of New Brunswick in common with the people of the whole of Canada. Before being able to accomplish the solution of all these great questions there is preliminary and essential work to be done at the port of St. John, and if he could be of any service to the port, he was ready to render it.

Upon the application of certain railway companies the Board of Railway Commissioners has decided that the reports of persons appointed by the Board to investigate railway accidents shall be privileged, and shall only be made public or given out upon application therefor by order of the Board.

MAINLY ABOUT PEOPLE.

Lord Strathcona has subscribed 1,000 guineas to the Scottish National Exhibition of 1908.

Andrew Thompson, President Quebec Ry., Light and Power Co., died at Quebec, Jan. 10, aged 76.

Mrs. E. Tiffin, wife of the General Traffic Manager of the Intercolonial Ry., is in Southern California.

D. Matheson, for many years a grain inspector on the C.P.R., died at Kildonan East, Man., Jan. 5.

J. M. Browning, who died at Montreal Dec. 22, was at one time C.P.R. Land Commissioner in British Columbia.

G. J. Page, who died in Toronto, Jan. 6, aged 86, was in the G.T.R. service for many years, retiring some 15 years ago.

A. Sheere, local manager Canada Railway News Co., London, Ont., was presented with a gold chain by the staff, Dec. 24.

A. A. Wright, of Toronto, an active member of the Dominion Marine Association, has gone on a Mediterranean trip.

W. Smith, at one time bridge superintendent for the Esquimalt and Nanaimo Ry., died at Chadboro Bay, B.C., Jan. 7.

W. W. Beckett, who died at Sherbrooke, Que., recently, was father of A. F. Beckett, Assistant Solicitor G.T.R., Montreal.

R. Dunlop, foreman of the Intercolonial car shop, Sydney, N.S., was presented with a gold ring by the employes, Dec. 24.

A. C. Killam, Chief Railway Commissioner, gave an address on the work of the Commission before the Canadian Club, Montreal, Jan. 20.

M. C. Dickson, agent G.T.R., Woodstock, Ont., Mrs. and Miss Dickson, have returned from a two months' visit to Great Britain.

Elwood B. Hosmer, son of C. R. Hosmer, director C.P.R., has entered the firm of Alex. Paterson & Co., stock brokers, Montreal.

Hon. C. C. Colby, who died at Montreal, Jan. 11, was a director of the Massawippi Ry. and of the Waterloo and Magog Ry.

Lieut. A. Piddington has been elected a director of the Quebec and Lake St. John Ry., succeeding the late T. A. Piddington.

F. R. Porter, Assistant Foreign Freight Agent G.T.R., Toronto, was married to Miss O. E. Baker, in Stratford, Ont., Dec. 20.

N. A. Rhodes, of Rhodes, Curry & Co., Amherst, N.S., has been elected President Standard Fuel Manufacturing Co., Fairview, N.S.

Mrs. A. Alexander, who died at Hamilton, Ont., Dec. 29, was mother of G. W. Alexander, Local Treasurer G.T.R., Detroit, Mich.

Miss L. Jaques, daughter of C. A. Jaques, Manager Merchants' Line of steamers, Montreal, was married there, Dec. 26, to J. W. Nicoll.

F. B. Scott, night chief operator C.P.R. telegraphs, Winnipeg, was presented with an address and a Morris chair by the staff, Jan. 6

C. E. Morgan, City Passenger and Ticket Agent G.T.R., Hamilton, Ont., who was taken ill suddenly early in Jan., has considerably improved.

D. B. Hanna, Third Vice-President Canadian Northern Ry., and Mrs. Hanna, left Toronto Jan. 24 for a fortnight's trip to Florida and Cuba.

Sir Wm. P. Howland, who died in Toronto, Jan. 2, aged 95, was a member of the Canadian syndicate which in 1880 offered to build the C.P.R.

F. W. Tye, formerly Chief Engineer C.P.R., returned to Montreal at the end of 1906, from a trip to Mexico in the interests of the Canada Electric Syndicate.

The Ontario Government has granted a gratuity of $1,000 to the daughters of the late K. Tully, consulting engineer of the Provincial Public Works Department.

R. McLennan, formerly a train dispatcher on the G.T.R. at Brockville, Ont., has been appointed secretary to F. H. McGuigan, Fourth Vice-President G.T.R.

R. Forget, M.P., President Richelieu and Ontario Navigation Co., has subscribed $200,000 to the building fund of the new Notre Dame Hospital, Montreal.

W. H. Grant, heretofore Superintendent of Construction Halifax and Southwestern Ry., Bridgewater, N.S., has been removed to Toronto, the line being completed.

Mrs. P. Mullarkey, who died at Ottawa, Ont., Dec. 27, aged 86, was mother of J. P. Mullarkey, railway contractor, Montreal, and heretofore Manager Montreal Terminal Ry.

R. Forget, President Richelieu and Ontario Navigation Co., Mrs. and Miss Forget, left Montreal, Sept. 20, for New York and London, Eng., intending to be absent for some time.

G. H. Duggan, Second Vice-President, and C. C. Fergie, have been elected directors Dominion Coal Co., Sydney, N.S., in place of Sir Wm. C. Van Horne and F. S. Pearson, resigned.

G. H. Ham of the C.P.R. head office staff, who underwent a serious operation at the Western Hospital, Montreal, Jan. 16, is reported to be making good progress towards recovery.

W. E. Blumhart, who died at Montreal recently, aged 62, was one of the contractors on the I.C.R., but subsequently engaged in the newspaper business, founding La Presse.

H. A. Fabien, at one time clerk in the C.P.R. General Passenger Department, Montreal, has been appointed Assistant to C. S. Mellen, President New York, New Haven and Hartford Rd.

J. J. Hill, President Great Northern Ry., U.S., states that however much he would like to be relieved of the responsibilities of his position, he could not see his way to retiring at present.

G. L. G. Sutherland, until 1900, foreman of the Michigan Central Rd. car shops at Detroit, Mich., who died there, Jan. 3, was a brother of D. S. Sutherland, Superintendent M.C.R., Detroit.

C. A. McGrath, who has resigned his position as Land Commissioner, Alberta Ry. and Irrigation Co., was presented with a service of silver plate by the Lethbridge, Alta., officials, Jan. 7.

Mrs. Keefer, wife of T. C. Keefer, C.E., C.M.G., died at Rockliffe, Ont., recently, aged 84. She was a daughter of the late Hon. Thos. Mackay, one of the contractors for the Rideau canal locks.

G. F. Hichborn, heretofore agent Great Eastern Fast Freight Line, New York City, has been appointed General Traffic Manager United States Rubber Co., with office at 42 Broadway, New York City.

Mrs. Troop, wife of H. D. Troop, of Troop and Son, shipowners, St. John, N.B., who died there Dec. 20, was mother of Mrs. C. E. MacPherson, wife of the Assistant General Passenger Agent, C.P.R., Winnipeg.

F. J. Hayden, formerly State Senator of Indiana, who died at Fort Wayne, Ind., Jan. 16, was a native of Cobourg, Ont., and was for a number of years Secretary of the Cobourg, Peterboro' and Marmora Ry. Co.

Miss K. Hanson, sister of the members of the firm of Hanson Bros., Montreal, died at Fowey, Cornwall, Eng., recently, at the residence of her brother, C. A. Hanson, of the firm of Coates, Son & Co., London, Eng.

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DEPARTURE TIMES FROM TORONTO:

1.45 p.m. daily, "Western Express," for Winnipeg and the West runs as far as Calgary only.

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District Passenger Agent
TORONTO

W. R. Tiffin, Superintendent Northern Division G.T.R., who has been granted three months' leave of absence, left Allandale, Ont., Jan. 13 for Vancouver, B.C., and proposes to visit California before returning to duty in April.

J. A. Cuttle, Managing Director, Montreal Transportation Co., left Jan. 17 for the Mediterranean, whence he will proceed to Scotland, in connection with the two steamships which his company is having built at Dumbarton.

J. P. O'Doherty, formerly connected with the mechanical department of the Canada Atlantic Ry., and latterly with the G.T.R., Ottawa, has been appointed general agent at Sorel, Que., for the Richelieu and Ontario Navigation Co.

Capt. McMaster, who died in Toronto, Jan. 7, aged 85, organized the Toronto Naval Brigade, which did service during the Fenian Raid. One of his daughters is the wife of A. L. Hertzberg, Engineer of Maintenance of Way, C.P.R., Montreal.

E. F. Seixas, General Manager Niagara, St. Catharines and Toronto Ry., who has not been very well for some time past, left at the end of Dec. with Mrs. Seixas for the Isle of Wight, expecting to return to St. Catharines, Ont., early in March.

C. A. Magrath, who recently resigned the Land Commissionership of the Alberta Railway & Irrigation Co., has gone to Europe for a few months' pleasure trip. He expects to continue to reside in the west, and to continue to be a factor in its development.

J. Camsell, at one time chief factor of the Hudson's Bay Co., Mackenzie River District, died at Winnipeg, Jan. 16. He was father of F. Camsell, of the G.T. Pacific Ry. engineering staff, and of P. Camsell, Canadian Northern Ry. Passenger Department, Winnipeg.

S. King, heretofore Assistant Master Car Builder, C.P.R., Montreal, who was recently appointed Superintendent of the Canada Car Co., Montreal, was presented with a cabinet of silver by the C.P.R. staff at the Angus shops, prior to taking up his new position.

F. Dane, who has been appointed a member of the Temiskaming and Northern Ontario Ry. Commission, is a native of Belfast, Ireland, but has resided in Toronto for a number of years. He is a grocery broker, and is best known for his work in connection with the Orange Order.

H. W. Pearson, who has resigned the Secretary-Treasurership of the Temiskaming and Northern Ontario Railway Commission, has been appointed Secretary of the Canadian Railway Accident Insurance Co., vice J. P. Dickson, who has resigned to engage in mining enterprises.

A. L. Smith, who has been appointed Superintendent District 3, C.P.R., Toronto, entered the company's service in 1885, and has occupied the positions of operator, agent, chief operator, train dispatcher, Chief Train Dispatcher, and latterly Chief Inspector of Train Dispatching.

Sir Percy Girouard, at one time on the C.P.R. engineering staff, has been appointed High Commissioner of Northern Nigeria, Africa. It is stated that the appointment is for a year, and that Sir Percy's chief work is to arrange for some railway construction in the country for the Imperial Government.

G. W. Hay was presented by G.T.R. officials and the staff in Toronto with a gold locket, set with a diamond, on leaving the G.T.R. General Baggage Agents' office, Toronto, Dec. 31, to become General Baggage Agent Lehigh Valley Rd. They also gave Mrs. Hay a brooch, set with pearls, emeralds and a diamond.

P. G. Grant, Assistant District Engineer Transcontinental Ry. surveys, was married at Quebec, Dec. 27, to Miss K. M. McCarthy, daughter of W. McCarthy, Government Inspector of Railways, Winnipeg. He was presented with a silver tea service and a cabinet of cutlery, Dec. 24, by the staff of the district at Quebec, A. E. Doucet, District Engineer, making the presentation.

R. Miller, of the C.P.R. Windsor St. station, Montreal, sailed for England on the Empress of Britain, Jan 11, for a holiday. Prior to leaving he was given a purse of gold from the heads of the departments, the presentation being made Jan. 9, by R. Kerr, Passenger Traffic Manager, and a second purse of gold from the station staff, Jan. 10, the presentation being made by W. G. Annable, General Baggage Agent.

H. G. Hunt, who died in the hospital at St. Boniface, Man., Jan. 1, aged 61, from hemorrhage of the brain, was at one time G.T.R. ticket agent in St. Catharines, Ont., and was the first President of the Canadian Ticket Agents' Association, holding that position in 1887, 1888 and 1889. In 1898 and 1899 he was employed in the editorial department of THE RAILWAY AND SHIPPING WORLD. Some five years ago he went to Manitoba, where he was engaged in newspaper work up to the time of his fatal illness.

A. E. Edmonds, who has been appointed District Passenger Agent C.P.R. at Detroit, Mich., was born at Woodstock, Ont., April 8, 1866. He commenced railway service on the G.T.R. as an operator in 1882, remaining in that company's service for about five years. In 1887 he entered the C.P.R. service as station agent and operator, subsequently becoming assistant ticket agent at Toronto Union Station. In 1893 he was appointed city passenger agent at Detroit, remaining in that position until promoted as District Passenger Agent Feb. 1.

W. Stitt, who has been appointed General Passenger Agent C.P.R. Eastern Lines at Montreal, was born in Kirkcudbrightshire, Scotland, Aug. 3, 1855, and entered transportation service with the Caledonian Ry., subsequently entering the service of the Glasgow and West of Ireland Steam Packet Co. He came to Canada in 1888, and entered the service of the C.P.R. Passenger Department at Winnipeg. In 1901 he went to Australia to represent that company in connection with the Canadian-Australian Steamship Line, of which he was appointed General Passenger Agent with office at Sydney, N.S.W.

Hon. G. A. Cox, who has resigned his position as President of the Canadian Bank of Commerce, Toronto, is officially connected with the following transportation and allied companies: Canada Foundry Co., director; Canada General Electric Co., director; Canadian Shipbuilding Co., director; Crow's Nest Pass Coal Co., owning the Morrissey, Michel and Fernie Ry., President; Dominion Iron and Steel Co., operating a steel rail mill, director; G.T. Pacific Ry., director; Ottawa Electric Ry., director; Toronto and Niagara Power Co., director; Toronto and York Radial Ry., director; Toronto Ry., director.

C. E. E. Ussher, who arrived in Winnipeg, Man., Jan. 16, to take up the duties of his new position, Assistant Passenger Traffic Manager C.P.R., was the recipient of a number of presentations at Montreal prior to his departure. On Jan. 9 he was the guest at a dinner at the Canada Club, at which there were present 200 of the principal commercial and transportation men of Ontario and Quebec. Ald. W. J. King presided in the absence through illness of the Mayor, the speakers including W. E. Davis, Passenger Traffic Manager, G.T.R.; R. Kerr, Passenger Traffic Manager, C.P.R.; G. T. Bell, General Passenger Agent, G.T.R.; Hon. J. I. Tarte; R. S. White, Collector of Customs; L. T. Marechal, W. Stitt, who succeeds Mr. Ussher at Montreal as General Passenger Agent; G. H. Ham, M. K. Cowan, K.C., Assistant Solicitor G.T.R., and C. W. Spencer, General Manager Mackenzie, Mann & Co.'s eastern lines. The Eastern Canadian Passenger Association entertained Mr. Ussher at luncheon, and presented him with a silver loving cup, on which was a suitable inscription. The Ontario passenger staff presented him with a gold watch and chain, and the New York staff sent a silver-mounted cut glass vase.

T. C. Burpee, whose portrait appears on the first page of this issue, was born at Sheffield, N.B., Dec. 11, 1852. He was educated at Sheffield, and his record is as follows: Aug. to Nov., 1875, chainman, New Brunswick Ry.; Nov., 1876, to Jan., 1877, levelman, New Brunswick Ry.; June, 1881, to Jan., 1882, rodman, Chicago, Milwaukee & St. Paul Rd., Spirit Lake branch, Iowa; Nov., 1884, to Jan., 1885, International Ry. survey through Northern Maine; Aug., 1885, to Jan., 1887, rodman and Assistant Engineer on Maintenance of Way, New Brunswick Ry.; Jan., 1887, to Jan., 1890, Assistant Engineer C.P.R. lines in New Brunswick and Maine; June, 1890, to Aug., 1890, transitman on preliminary survey of Bangor and Aroostook Rd.; Aug., 1890, to April, 1891, chief of location party, same road; April, 1891, to Jan., 1896, Assistant Engineer of Construction, same road; Jan. to May, 1896, chief of party of location on Woodstock & Centerville Ry., N.B.; June to Dec., 1896, Assistant Engineer in charge of construction of yard at Old Town, Me., for Bangor and Aroostook Rd.; May to Aug., 1897, Assistant Engineer on Canal Construction, Cardinal, Ont.; Aug., 1897, to 1899, Chief Assistant Engineer Intercolonial Ry.; July, 1899, to the present, Engineer of Maintenance of Way, same road.

I.C.R. Trans-Atlantic Mail Trains.

In our Jan. issue it was mentioned that the Intercolonial Ry. had put on a special train to run between Halifax and Montreal for the speedy conveyance of mails and passengers from trans-Atlantic steamships, that the first train had made the run in 22 hours, and that it was expected to cut this to 20 hours or less. We have been favored with official figures of nine runs of this train between Halifax and Montreal as follows: Nov. 16 and 17, S.S. Virginian, 22.05 hours; Nov. 23, Empress of Ireland, 19.43 hours; Dec. 1 and 2, Tunisian, 22.55 hours; Dec. 7, Empress of Britain, 21.10 hours; Dec. 15, and 16, Ionian, 22.10 hours; Dec. 29 and 30, Parisian, 18.27 hours; Jan. 4, Empress of Britain, 21.49 hours; Jan. 14 and 15, Pretorian, 23.01 hours. It will be observed that the fastest run was 18.27 hours. The average time of the 9 runs was 21.34, and the average speed per hour for the 9 runs was 38.8 miles

The C.P.R. has presented the town of Calgary, Alta., with a site for the proposed municipal waterworks station.

An agreement is said to have been reached between the railway employes' association in Canada and the companies for the enforcement of rest after duty. Under the terms of the agreement every train man who has been on duty 16 hours must be given 10 hours' rest, and if he is out for 12 to 15 hours, he must book rest for eight hours.

Under the act passed in 1906 the Ontario Government collected $375,689 in taxes from railway companies doing business in Ontario. From this $30,000 was deducted to meet the expenses of the Ontario Railway and Municipal Board, and the balance is being distributed, at the rate of 8 cents per head, to the municipalities of the province

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National Transcontinental Railway.

Tenders are being received to Feb. 14, by the Commissioners, for the construction of the following sections of the projected line:

DISTRICT A.—From at or near Moncton, N.B., westerly for about 50 miles. From at or near Grand Falls, N.B., westerly to the boundary between New Brunswick and Quebec, about 62 miles.

DISTRICT B.—From at or near Quebec Bridge easterly for about 150 miles. From about 150 miles west of Quebec Bridge, westerly to Weymontachene, Que., about 45 miles.

DISTRICTS C AND D.—From about 8 miles west of the Abitibi River crossing easterly for about 150 miles.

The plans for these sections of the line were approved by the Government at the end of 1906.

Referring to the two sections under contract, the Minister of Railways, replying to a question in the House of Commons, Jan. 21, said between Quebec and La Tuque, the common earth excavation was estimated at 6,303,682 cubic yards, and the solid rock at 1,169,150 cubic yards. At the end of the year there had been removed 664,955 cubic yards of earth and 322,367 cubic yards of rock. On the line between Winnipeg and Lake Superior Junction, there was estimated to be 11,233,247 cubic yards of earth excavation and 3,696,336 cubic yards of rock cutting. At the end of 1906 there had been removed 282,000 cubic yards of earth and 179,920 yards of rock.

The Commissioners have practically purchased a site in the east part of Winnipeg as a site for shops and yards. The site will have a length of about two miles and a width of about a mile, and the price is said to be about $200,000.

We have been advised that no track was laid on the main line up to the end of 1906, with the exception of a few hundred feet at St. Boniface, Man.

GRAND TRUNK PACIFIC RY.

On the first section put under contract from Portage la Prairie, Man., westerly, 35 miles of steel had been laid to the vicinity of Pine Creek, to Dec. 31, 1906, and the company's officers state that it is expected to have track laid into Saskatoon, Sask., by the end of 1907. Five mile of tracks have been laid in the yards at Portage la Prairie, where large quantities of material are being assembled for construction during the current year. An agreement was reached, Jan. 13, with the Portage la Prairie council for the sale of a portion of Pacific Ave. to the Company, the closing of several streets, and the opening up of a new street the length of Pacific Ave., south of the G.T.P. right of way. The May-Sharp Construction Co. is pushing the excavation for the bridge at Clover Bar, Sask., so as to be ready to start the concrete work early in the spring. The survey work through British Columbia, according to a statement credited to Division Engineer Van Arsdol, is progressing satisfactorily. The actual locating of the line has not been made for any great part of the way, but lines have been run over the whole of the route intended.

The G.T.P. Ry. has purchased altogether about 1,200 acres of land in the east part of Winnipeg, including the Arctic ice farm, upon which it will locate its shops and yards. It is reported that the plans for the shops are completed, and that tenders for their erection are to be asked for at an early date. Another report states that the property in question has been acquired by the G.T.P. Ry. in conjunction with the Commissioners of the Transcontinental Ry., and that it will be used for shop and yard purposes by the Eastern and Western Divisions of the line.

With respect to the construction of branch lines we were advised, Jan. 1, that while the company's charters provide for branch lines from either Orillia or North Bay, Ont., to a junction with the National Transcontinental Ry., it had not made any arrangement for the construction of these lines, and it was not probable anything would be done in that direction in the immediate future, as it was concentrating all forces and all labor procurable on the branch line from Fort William, Ont., and on the main line from Portage la Prairie to Edmonton, Alta.

Surveys for the branch into Regina, Sask., have been completed. The route passes through Fort Qu'Appelle. (Jan., pg. 29.)

Canadian Northern Railway Construction.

Canadian Northern Quebec Ry.—Good progress is reported to have been made upon the construction of the line from Garneau Junction to Quebec. The roadbed easterly to Portneuf is ready for the rails, and the piers and abutments for the bridges over the Batiscan and Ste. Anne rivers are almost completed. The work between Portneuf and Quebec is fairly heavy, and gangs of men are working throughout the winter on the rock cuttings near Portneuf, Cap Saute, St. Augustin, Les Ecureuils, and Cap Rouge.

Canadian Northern Ontario Ry.—The contractors have several gangs of men engaged upon the rock cuttings east of Rockland, Ont., on the line from Hawkesbury to Ottawa. There are 30 trestles to be built, several of them being over 400 ft. in length, and construction on these has been delayed owing to difficulty in obtaining the necessary timber. A spur line of about a mile will be laid in L'Orignal, and spur tracks will also be constructed to the pulp mills, and the Hawkesbury Lumber Co.'s premises. The line is expected to be completed into Ottawa in Sept.

The plans for the entrance of the lines from the east into Toronto and from the James Bay section of the line are being considered by the Minister of Railways. Survey parties are in the field upon location work between Toronto and Ottawa, between Key Inlet and Ottawa, and upon various branch lines throughout western Ontario, for the construction of which authority is being asked at the current session of the Dominion Parliament.

A contract has been let to the Central Contracting Co. for the construction of the Nepigon Ry. from Nepigon, on Lake Superior, to Lake Nepigon, about 40 miles. No work has as yet been done, but the location is being revised. The Ontario Legislature will be asked at its current session to pass an act extending the time for the commencement and completion of the projected railway, and authorizing an amalgamation with the Canadian Northern Ontario Ry.

Canadian Northern Ry.—In his annual report to the Manitoba Legislature as Railway Commissioner, Premier Roblin recounted what had been done since 1896 in the way of railway construction by Mackenzie, Mann & Co., in Manitoba, Saskatchewan, Alberta, and Ontario. Referring particularly to the work done in Manitoba during 1906, he said: "Track has been laid on the branch from Emerson to the main line at Sprague. This line was completed to Ridgeville, about 10 miles east from Emerson, in 1904, and the extension now makes a line altogether 73 miles long. The line gives a new and short route from southern Manitoba to Port Arthur, Ont., and will enable the hauling of grain from the Morris-Brandon branch through the province to the main port without passing through Winnipeg, thus saving a very considerable mileage. Considerable work has also been done on the line from Oakland on the Portage la Prairie-Delta branch, grading having been done as far as Sandy Bay on the west shore of Lake Manitoba, a distance of about 37 miles, and steel having been laid on about 17 miles thereof. It is the intention to resume construction of this work during the forthcoming spring and to carry the line further on. About 7 miles of additional steel has been laid on the Oak Point branch, which it is the intention to extend northerly along the east shore of Lake Manitoba. In addition to the foregoing, about 55 miles of grading has been done on the Brandon-Regina line, and also an additional 20 miles of grading on the Rossburn branch. Tracklaying and other work upon these lines will be prosecuted during 1907."

The Mayor of Portage la Prairie, Man., told the Council recently that he had been informed by M. H. McLeod, Chief Engineer, that it was the intention of the company to go ahead with the construction of machine shops and a 21-stall roundhouse there during the summer.

The branch line from Edmonton to Morinville, Alta., 22 miles, was opened for traffic Jan. 11.

Application is being made to the Minister of Railways to utilize the Yellowhead Pass for the company's line from Edmonton to the Pacific coast. The G.T. Pacific Ry. has also filed plans for a line through the same pass, and the two applications will likely be heard together. The location shows a line about 250 miles in length, from Edmonton to the summit, which is 3,708 ft. above sea level. (Jan., pg. 36).

G.T.R. Betterments, Construction, Etc.

Montreal Track Elevation.—A conference has been held in Montreal between representatives of the company and the City Council respecting the elevation of the tracks in the city. W. Wainwright, General Assistant and Comptroller G.T.R., said the conference was a preliminary one for the purpose of placing the plans before the council so that they might be studied prior to an agreement being discussed. The details of the plan were being worked out by the company's engineers, and after these had been completed and a statement of the estimated cost prepared, Mr. Hays would be prepared to confer with the Council upon the whole question. The company desired to get rid of the level crossings, but as the railway was in existence before many of the streets were, it had rights which could not be sacrificed. The committee, it is understood, will arrange to visit Philadelphia and other places where a similar work of track elevation has been carried out in order to see what had been done.

Central Station, Ottawa.—A new agreement between the G.T.R. and the Government for a lease of the canal reserve at Ottawa for the purpose of a central station was signed Jan. 7. The lease is for 999 years, the rental being $1,100 a year, to be readjusted every 21 years. The station building is to cost at least $250,000, to be under the control of the G.T.R., but terminal facilities are to be afforded to other companies upon fair terms. The Sparks estate, which originally granted the land to the Crown for canal purposes, objected to its utilization for railway purposes, and an agreement was reached whereby the estate was to receive $80,000 in full settlement of its claim. This sum the G.T.R. agrees to pay. Plans are to be prepared by the company and submitted to the Government for approval within six months.

Madoc to Eldorado.—The Madoc, Ont., Board of Trade has passed a resolution asking the G.T.R. to extend its line from Madoc northerly to Eldorado, about seven miles.

Stratford Shops and Station.—The improvements at the Stratford, Ont., terminals,

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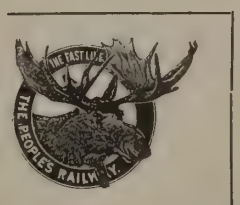

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station and locomotive shops, are estimated to cost $250,000. The plans for the new station are to be submitted to the City Council at an early date. The City Council has passed the by-laws necessary for the closing of certain streets as agreed upon, such by-laws to become operative upon the work of the shop extension being gone on with at once.

London Improvements.—The improvements west of London, Ont., are nearing completion, the filling for one track on the new elevation was expected to be finished by the end of Jan., and work on the Cove bridge was expected to be done about the same time. It is stated that when the elevation west of Rideout St. is completed and the big cut on the Hyde Park grade finished, the company will have expended $750,000. Mayor Judd stated Jan. 14, that it was his intention to take up with the company the question of the elevation of the tracks from Rideout St. as far east as possible. (Jan., pg. 23).

TRANSPORTATION APPOINTMENTS.

Alberta Ry. and Irrigation Co.—C. A. Magrath, Land Commissioner, has resigned.

Canadian Northern Ontario Ry.—W. H. Grant, heretofore Manager of Construction, Halifax and Southwestern Ry., has been appointed Manager of Construction, C.N.O.R. Office, Toronto.

Canadian Pacific Ry.—As announced in our December issue, C. F. Rydberg was appointed Superintendent Angus car shops, Montreal. He really succeeds S. King, Assistant Master Car Builder, who resigned to accept service elsewhere, the title being changed.

G. T. Rooke, formerly train dispatcher at Toronto, and latterly rules examiner, has been appointed Train and Station Inspector, vice A. L. Smith, promoted. Office, Montreal.

W. Tansley, heretofore Night Chief Train Dispatcher, Ontario Division, Toronto, has been appointed Chief Train Dispatcher, districts 1 and 3, Ontario Division, Toronto.

R. R. Jelly, heretofore train dispatcher old district 2, Ontario Division, Toronto, has been appointed Night Chief Train Dispatcher, districts 1 and 3, Toronto.

C. L. White has been appointed Superintendent's Accountant district 1, Ontario Division. Office, Toronto.

E. Pattison, heretofore Superintendent's accountant, Ontario Division, district 1, Toronto, has been transferred to district 3, Toronto.

W. A. Killingsworth, heretofore Chief Train Dispatcher, Ontario Division, who has been transferred from Toronto to London, Ont., has now jurisdiction over district 2, Ontario Division.

V. A. Harshaw, Trainmaster, has been transferred from Toronto Jct. to London, Ont.

G. W. Thornton, heretofore chief clerk to Division Engineer, Toronto, has been appointed Superintendent's chief clerk at London, Ont.

R. J. How, heretofore Superintendent's Accountant district 2, Ontario Division, at Toronto, has been appointed Superintendent's Accountant district 2, at London, Ont.

G. J. Bury, heretofore General Superintendent, Central Division, has been appointed Assistant General Manager. Office, Winnipeg.

A. Price, heretofore Superintendent of Transportation, Western Lines, has been appointed General Superintendent, Central Division, vice G. J. Bury, promoted. The position of Superintendent of Transportation has been abolished.

J. McLellan was appointed Acting Superintendent of Terminals at Winnipeg, during the absence on a month's leave of A. Belbeck.

R. Sinclair has been appointed Bridge and Building Master district 2, Western Division, succeeding J. K. Smith, resigned.

M. Newland has been appointed acting Roadmaster of the Sirdar section, district 2, Western Division, succeeding R. Sinclair, appointed Bridge and Building Master.

R. Marpole, General Superintendent, Pacific Division, is to be appointed to an executive position, with headquarters at Vancouver, B.C.

F. F. Busteed, heretofore Assistant Chief Engineer, Western Lines, has been appointed General Superintendent, Pacific Division, vice R. Marpole.

J. E. Sutherland, heretofore clerk in the office of the Manager C.P.R. Steamship lines, has been appointed Chief Clerk in the office of the General Superintendent C.P.R. trans-Pacific Steamship lines at Vancouver, B.C.

A. E. Edmonds, heretofore City Passenger Agent, Detroit, Mich., has been appointed District Passenger Agent. Office, 7 Fort Street West., Detroit; territory lower peninsula of Michigan and along the line of the Lake Shore and Michigan Southern Ry. from Toledo to Ashtabula, Ohio.

J. H. Griffin has been appointed District Freight Agent at San Francisco, Cal., vice M. M. Stern, resigned.

Delaware, Lackawanna and Western Rd.—F. P. Fox, heretofore Division Passenger Agent, Buffalo, N.Y., has been appointed Advertising Manager. Office, New York.

E. J. Quackenbush, heretofore Division Passenger Agent, Syracuse, N.Y., has been appointed Division Passenger Agent, Buffalo, succeeding F. P. Fox.

Dominion Atlantic Ry.—D. J. Murphy, in addition to his duties as Trainmaster, will assist the Traffic Superintendent in the matters of transportation of passengers and freight.

Grand Trunk Pacific Ry.—L. B. Merriam has been appointed Division Engineer at Winnipeg, vice A. C. Dennis, resigned.

Grand Trunk Ry.—H. F. Coyle, heretofore Trainmaster at Belleville, Ont., has been appointed Assistant Superintendent districts 1, 2 and 3, vice C. L. Mayne, transferred. Office, Island Pond, Vt.

W. P. Hinton, heretofore General Agent Passenger Department, Ottawa, Ont., has been appointed Assistant General Passenger and Ticket Agent. Office, Montreal. He will have charge of trans-Atlantic passenger traffic and such other duties in connection with the General Passenger Department as are assigned to him.

C. L. Mayne, heretofore Assistant Superintendent at Island Pond, Vt., has been appointed Assistant Superintendent Montreal Terminals, including lines to St. Lambert and Lachine, and the Jacques Cartier branch, vice J. L. Gogerty, resigned, and will have jurisdiction over district 4, vice J. J. Conelly, transferred. Office, Montreal.

S. Ennes, heretofore Master of Transportation at London, Ont., has been appointed Assistant Superintendent, Ottawa Division, with jurisdiction over station employes, train and yard service, vice L. G. Coleman, transferred. Office, Ottawa, Ont.

L. G. Coleman, heretofore Assistant Superintendent, Ottawa Division, has been appointed Assistant Superintendent districts 5, 6 and 7, vice H. F. Coyle and J. J. Conelly, transferred. Office, Belleville, Ont.

G. R. MacLeod, heretofore Chief Clerk to the Fourth Vice-President, has been appointed Resident Engineer, vice F. L. Somerville, resigned. Office, Toronto.

W. R. Tiffin, Superintendent Northern Division, having been granted leave of absence, T. J. Lynch, Assistant Superintendent, will have full charge of the division during his absence. Office, Allandale, Ont.

N. B. Walton, heretofore Secretary to the Fourth Vice-President, has been appointed Assistant Trainmaster, districts 22 and 23, and will report direct to Trainmaster A. J. Nixon. Office, Palmerston, Ont.

J. J. Conelly, heretofore Trainmaster at Montreal, has been transferred to Richmond, Que., with jurisdiction over districts 1 and 2.

The office of trainmaster districts 4 and 5 is abolished.

Great Eastern Fast Freight Line.—W. P. Snyder has been appointed agent at New York, succeeding G. F. Hichborn, who has been appointed General Traffic Manager U.S. Rubber Co.

Halifax and Southwestern Ry.—L. H. Wheaton, heretofore Chief Engineer, has been appointed Engineer of Maintenance of Way. Office, Bridgewater, N.S.

Intercolonial Ry.—We were advised from the General Manager's office, Jan. 2, that nothing was known there of the reported resignation of E. H. Allen, Claims Agent.

M. P. Shields has been appointed mechanical foreman at Chaudiere Jct., Que., vice M. Henchey, assigned to other duties.

Merchants Despatch Transportation Co.—Carl Howe, heretofore Assistant General Freight Agent Michigan Central Rd., Buffalo, N.Y., has been appointed Traffic Manager Merchants Despatch Transportation Co., vice H. B. Tindall, resigned. Office, 350 Broadway, New York.

Michigan Central Rd.—G. C. Ransom has been appointed Division Freight Agent, with headquarters at Buffalo, N.Y. The office of Assistant General Freight Agent, heretofore held by Carl Howe, has been abolished.

New York Central and West Shore Rd.—The western division was divided into three divisions, Jan. 1, known as the Western, Buffalo and Rochester Divisions. L. H. Van Allen has been appointed Superintendent of the Buffalo division, which comprises all terminals of all N.Y.C. lines terminating in Buffalo, the main line from Depew west, the Niagara Falls, Lewiston and Lockport branches, the Terminal Rd. of Buffalo, the yards at Buffalo, and the Suspension Bridge.

F. W. Everett has been appointed Superintendent of the Western Division, office Syracuse, N.Y., and S. R. Payne is Superintendent at Rochester, N.Y.

Pere Marquette Rd.—G. G. Little, heretofore contracting freight agent at Buffalo, N.Y., has been appointed Travelling Freight Agent in Southern New York and Northern Pennsylvania. Office, New York.

Richelieu and Ontario Navigation Co.—H. Foster Chaffee, heretofore Western Passenger Agent, has been appointed Assistant General Passenger Agent. Office, Toronto.

Temiskaming and Northern Ontario Ry.—F. Dane, Toronto, has been appointed a commissioner succeeding C. B. Smith, resigned.

H. W. Pearson, Secretary-Treasurer, having resigned, A. J. McGee, heretofore General Accountant, has been appointed to succeed him.

H. F. MacDonald, of the Commission's Toronto staff, has been appointed acting accountant.

Wabash Rd.—L. J. Ferritor, Superintendent at Decatur, Mich., is reported to have resigned.

White Star Line (Lake Steamers).—G. E. Phillips has been appointed Assistant Traffic Manager. Office at Detroit, Mich.

Winnipeg Jobbers' and Shippers' Association.—G. E. Carpenter, heretofore chief clerk to the General Freight Agent C.P.R., Winnipeg, has been appointed Manager of this association's freight department. The association was formed for the purpose of obtaining better facilities from the transportation companies, correcting any detrimental legislation affecting the jobbing and shipping trade and for procuring favorable legislation in the interests of the association.

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Parry Sound Train 8.30 a.m.	Parry Sound Train 4 p.m.
Evening Local to Washago 5.20 p.m.	Morning Local from Washago 10.00 a.m.

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TO

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GAMEBRIDGE WASHAGO BALA FOOTES BAY PARRY SOUND

Information, Tickets, Time Tables, Toronto City Office, Corner King and Toronto Streets, and all agents.
WM. PHILLIPS, General Passenger Agent

Steam Railway Track Laid in 1906

The figures of track laid in 1906, as published in our Jan. issue, are only slightly altered upon receipt of further information. The G.T. Pacific Ry. laid about 35 miles westerly from Portage la Prairie, and this brings the total of additional track laid to 1204.06 miles. The C.P.R. laid the largest mileage, 394.50 miles; if the Nicola, Kamloops and Similkameen Ry., which it will operate, is included, 441.50 miles; while the Mackenzie, Mann & Co. lines laid 340.85 miles. The Great Northern Ry., U.S.A., through its three Canadian companies, laid 175.55 miles of new track. The mileage laid in the different provinces follows:

Ontario	336.06
Manitoba	272.69
Saskatchewan	171.76
Quebec	113.10
Alberta	97.63
Nova Scotia	89.88
British Columbia	76.09
Yukon Territory	32.00
New Brunswick	14.85
	1,204.06

	Miles.	Miles.
ATLANTIC, QUEBEC AND WESTERN RY.		
Paspebiac to Port Daniel Centre		20.00
CANADIAN NORTHERN RY.		
Extension Emerson branch to Vassar, Man.	47.35	
Winnipeg to Oak Point Jct.	7.02	
Oakland to Totogan, Man.	17.11	
Cardinal spur	1.25	
From Etoimami, Sask., north	50.00	
Spur, main line to Battleford, Sask.	7.46	
End of track to Stoney Plains, Alta.	17.13	
Edmonton to Morinville, Alta.	21.30	
		168.67
CANADIAN NORTHERN ONTARIO RY.		
Vandorf to Don, Ont.	27.00	
Mileage 74.5 to Washago, Ont.	13.50	
Mileage 106.5 to Washago, Ont.	18.50	
Portage Lake to mileage 21, Ont.	16.00	
Romford (C.P.R. crossing) to mileage 118, north of Parry Sound, Ont.	10.00	
		85.00
CANADIAN PACIFIC RY.		
Highlands to Canada Sugar Refinery, Que.	6.00	
Staynerville to Brunet's Quarry, Que.	4.00	
Nipissing Jct. to Temagami Co.'s Mills, Ont.	3.00	
Guelph to Blyth, Ont. (Guelph & Goderich Ry.)	63.50	
Bolton to Bala, Ont.	93.00	
Romford to French River, Ont.	38.00	
Winnipeg Beach to Gimli, Man.	9.00	
Wolseley-Reston branch, mileage 60 to 122	62.00	
Teulon to Komamo, Man.	9.50	
Strasburg north, mileage 202 to mile 219	17.00	
Pheasant Hills Branch, mileage 345 to 360	15.00	
Moose Jaw to Tuxford, Sask.	15.30	
MacLeod, Alta., into town	2.50	
Daysland to Hardesty, Alta.	47.50	
Yahk to Kingsgate, Alta.	9.20	
		394.50
CENTRAL ONTARIO RY.—Bancroft to Bird's Creek, Ont.		5.00
GRAND TRUNK PACIFIC RY.—From Portage la Prairie, Man., westerly, about		35.00
GRAND TRUNK RY.—From Lindsay, Ont., westerly		3.51
GREAT NORTHERN RY. (U.S.) LINES IN CANADA—Brandon, Saskatchewan and Hudson Bay Ry., International Boundary to Brandon, Man.	69.45	
Midland Ry. of Manitoba, International Boundary to Portage la Prairie, Man.	77.01	
Vancouver, Victoria and Eastern Ry. and Navigation Co., International Boundary at Midway, B.C. to International Boundary near Molson, B.C.	29.09	
		175.55
HALIFAX AND SOUTHWESTERN RY.—Bridgewater to Jordan River, N.S.	42.42	
Jordan River to Barrington, N.S.	44.76	
		87.18
INTERCOLONIAL RY.—From North Sydney to Sydney Mines, N.S.		2.70
INTERNATIONAL RY. OF NEW BRUNSWICK—Mileage 22 to mileage 33		11.00
KLONDIKE MINES RY.—Dawson to Sulphur Springs, Yukon		32.00
NAPIERVILLE JUNCTION RY.—International Boundary at Lacolle to St. Constant, Que.		27.00
NICOLA, KAMLOOPS AND SIMILKAMEEN RY.—Spence's Bridge to Nicola, B.C.		47.00
ORFORD MOUNTAIN RY.—Potton Springs to Maisonville, Que.		7.00
PRINCETON BRANCH, WASHINGTON COUNTY RY.—Increase of mileage by diversion of line between Banting and Princeto		0.35
QUEBEC AND LAKE ST. JOHN RY.—		
La Tuque branch	16.75	
Roberval Wharf branch	1.00	
Gosford branch	1.50	
		19 25
QUEBEC CENTRAL RY.—Beauceville to St. George, Que.		9.00
ST. MAURICE VALLEY RY.—Three Rivers to Shawinigan Falls, Que.		20.85
RED DEER LUMBER CO.—Elk Gate Jct. to Barrows, Sask.		5.00
TEMISKAMING AND NORTHERN ONTARIO RY.—Boston to McDougall's Chute, Ont.		45.00
YORK AND CARLETON RY.—Stanley to Glippen Glen, N.B.		3.50
		1,204.06

AFFILIATED LINES IN UNITED STATES

	Miles.	Miles.
MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—From Brumbaugh to Armourdale, N.D.	10.38	
From Flaxton to Ambrose, N.D.	50.92	
From Garrison to Max, N.D.	13.70	
From Max to Ryder, N.D.	30.00	
From Drake to Dogden, N.D.	18.80	
		123.80
WASHINGTON AND GREAT NORTHERN RY.—From Molson to Oroville, Wash.		27.00

During 1906, the second track mileage of Canadian steam railways was increased by 141.842 miles, distributed as follows:

CANADIAN PACIFIC RY.—West Fort to Neebing, Ont.	4.9	
From Neebing to Murillo, Ont.	5.8	
From Dexter to Linko, Ont.	5.6	
From Murillo to Kakabeka, Ont.	4.9	
From Ignace to Gull River, Ont.	7.4	
Between St. Annes and Vaudreuil, Que.	3.4	
		32.0
GRAND TRUNK RY.—Between Lynden and Alford stations, Ont.		3.50
INTERCOLONIAL RY.—From Halifax to Windsor Jct.	13.898	
From Halifax to Richmond, N.S.	0.881	
From Richmond to Windsor Jct.	13.017	
From Stellarton to New Glasgow, N.S.	2.095	
		15.112
MICHIGAN CENTRAL RD.—From Springfield to Hagarsville, Ont.	46.46	
From Tilbury to Ridgetown, Ont.	30.48	
From Welland to Bridgeburg, Ont.	17.29	
		94.23
		144.842

Railway Statistics for 1905-6.

The mileage of completed railways in the Dominion on June 30, 1906, was 21,518, an increase of 917 miles, besides 4,085 miles of sidings. The paid-up capital was $1,332,498,705, an increase of $83,832,291; the C.P.R. has 8,506 miles, the G.T.R. 3,111 miles, the Intercolonial 1,483 miles, the Canada Atlantic Ry. 453 miles and the Canadian Northern Ry. 2,482 miles.

The total expenditure of the year on the I.C.R. was $15,732,812, of which $6,102,565 was charged to capital, $7,895,653 to revenue, and $1,736,593 to income. The expenditure on Government railways prior to and since Confederation up to July 1, 1906, on capital was $154,876,086, on income $159,466,261, making a total expenditure of $314,342,348. The revenue received from July 1, 1867, to July 1, 1906, was $112,571,053. The expenditure on canals was $114,395,281, and the revenue derived therefrom $13,513,583.

The operation of the I.C.R. during the year resulted in earnings of $7,950,552, an increase of $899,660 over 1905. The gross working expenses of $7,893,653 represented a decrease of $1,012,600. The I.C.R. gave a profit of $61,915, the Windsor branch a profit of $31,966, and the P.E.I. Ry. a loss of $36,982. During the year there was an addition of $3,765,170 to the capital expenditure on the I.C.R., making the total capital expenditure on the whole road, together with the acquired Canada Eastern Ry., $81,238,728.

The passenger traffic produced 30.06% of the gross earnings, and the freight traffic, 65.67%, and the carriage of mail and express, 4.27%. There was a decrease of 73,800 in the number of passengers carried. The decline was in the local passengers, there being an increase of 24,656 in the number of through passengers. There was a substantial increase in both the local and through tonnage in regard to the freight.

The accident returns show a total of 361 persons killed; 16 being passengers, 139 employes, and 242 others. By train collisions and derailment one passenger, 35 employes and two others were killed, and 102 passengers, 95 employes and 12 others were injured. Through jumping on or off trains or engines in motion, 5 passengers, 8 employes and 20 others were killed, and 49 passengers, 70 employes and 40 others were injured. Through walking, lying or being on the track, 5 passengers, 38 employes and 125 others were killed, and 2 passengers, 43 employes and 65 others were injured. Through falling from cars or engines 4 passengers, 12 employes and 3 others were killed and 20 passengers, 163 employes and 22 others were injured. Through being struck by engines or cars at highway crossings, 1 passenger, 2 employes and 47 others were killed, and 2 employes and 74 others were injured. In the work of coupling cars, 10 employes were killed and 128 employes were injured, a total of 138, as against 130, 178, 211, 241 and 290 in the five preceding years, respectively; a very satisfactory testimony to the efficiency and value of the automatic car couplers now growing into general use.

There were 814 miles of electric railway, the paid-up capital of which was $63,857,970. The gross earnings were $10,966,872. The working expenses were $6,675,038. The car mileage was 50,618,836 ,an increase of 4,659,735 miles. There were 47 persons killed, 12 being passengers, 2 employes and 32 others. There were 1,653 persons injured.

Northern Navigation Co. of Ontario.

Following is the report for the year 1906 presented at the annual meeting in Toronto, Jan. 29: Navigation opened on Lake Superior on April 15, and on the Georgian Bay on April 23, which was about ten days earlier than in 1905, with bright prospects for the season's business, which were fully realized as to the gross earnings, but not as to the net result. Last winter the company acquired the str. City of Windsor, and during Aug. purchased the iron package freight str. Cuba, now Ionic, cost $41,000, for the Lake Superior route, to take care of the steadily increasing business. On May 13, the str. Huronic, eastbound trip, while entering the Canadian canal at Sault Ste Marie at night ran out of the channel through the range lights not being lit, and was damaged, which was fully covered by insurance, excepting the extra wages paid workmen for overtime in the dry dock, and the profits of the two trips. The str. Monarch, on Dec. 6, eastbound, ran ashore on Blake's Point, Isle Royale, and became a total loss. She was valued in the books at $100,000, and was insured for that, but $9,000 was for fire only, and there is in the profit and loss account a debit of $11,051.67, which covers expenses incurred in the relief of passengers and crew, and the usual charges for collecting insurance. The str. Ionic, on Dec. 7, westbound, while lying at anchor in shelter under White Fish Point, Lake Superior, was blown ashore on account of a sudden change of wind. She was released by tugs, taken to Sault Ste. Marie, viewed by underwriters' inspector and afterwards proceeded to Port Arthur, accompanied by a tug, where she arrived on Dec. 21, and will remain there until the opening of navigation, when she will go to Duluth for repairs which are covered by insurance.

Last year eight steamers appeared in the balance sheet at $800,000. Deducting the loss of the Monarch, $100,000, and adding the value of the City of Windsor, $9,000, and $41,000 for the Ionic, shows a total value

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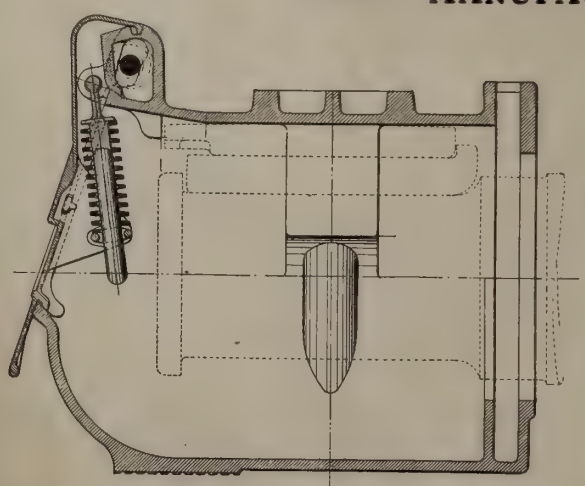

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of $750,000 this year for nine steamers. The gross earnings of the steamers were $606,950.20, and the expenditure $471,876.63, leaving a net balance of $135,073.57, which with the balance at credit of profit and loss account for 1905, the amount received from J. J. Long's estate, $27,750, and the conscience money and dividend on stock and bonds, $298.00, make a total of $183,216.23. This account was charged during 1906 with claims for 1903, 1904 and 1905, $4,937.66; loss on Monarch and expenses therewith, $11,051.67; written off special account for linen and freight carriers, etc., $2,000; reducing that amount to $2,000, which should be written off next year; car demurrage not expected to be charged against the company, $1,524.00; written off diving suit and piano account, $673.00; repair and maintenance account for repairs on steamers, $9,202.49, leaving a balance of $153,827.41; from which a dividend of 6% and a bonus of 1½% for the year ended Dec. 31, was declared, amounting to $63,000, and a bonus paid to officers on the steamers and office staffs amounting to $3,728.00, of which $3,126.00 went to the steamers' officers, and balance to office staff, the increased business and long season making more work all round, and as most of the officers had not received any increase for some years, it was thought well to recognize in this way their loyalty and devotion to the company's interests, leaving $87,099.41, from which has been transferred amounts as follows: steamer renewal fund, $25,000; repair and maintenance, $13,000; marine insurance fund, $7,000, as your directors believe it wise to set aside each year amounts for this purpose, based on percentage of value and age of each steamer, to take care of their up-keep and provide a renewal fund, and also establish a marine insurance fund to take care of marine losses on the Georgian Bay fleet, which have hitherto only been insured against fire. Percentage of expenses to gross earnings, not including claims paid for the last four years, are as follows: 1903, 94.16%; 1904, 89.71%; 1905, 80.73%; 1906, 77.73%. Although the gross earnings for 1906 were 33% higher than in 1905, the percentage of operating expenses has only been reduced 3% on account of increased price of coal, increased cost of handling freight at Point Edward, because of higher wages and inadequate facilities for the increased tonnage, the outfit of City of Windsor, heavy legal and other unexpected expenses, amounting in all to $28,567.00, or over 4½% of the operating.

The loss of the Monarch made it necessary to strengthen the fleet, and as a steamer could not be built in time for 1907, the steel str. Tadousac was purchased and is being fitted up as a package freighter, costing in all about $150,000. It is proposed to run a freight steamer from Midland, Collingwood and Owen Sound to head of Lake Superior during the coming season. In order to do justice to the increased business sure to accrue when the Grand Trunk Pacific Ry is in operation, two new steamers of the Huronic type should be added to the fleet, but so far the board has not been able to make an arrangement that would warrant such an expenditure, although negotiations are in progress.

ASSETS

Nine steamers	$750,000.00	
Buildings, furniture, etc.	12,695.08	
		$762,695.08
Fuel and supplies	$ 16,719.67	
Insurance unexpired	8,418.07	
Insurance receivable	112,669.87	
Accounts receivable	35,104.00	
Stocks and bonds	1,500.00	
Bank of Toronto	55,729.48	
		230,141.09
		$992,836.17

LIABILITIES

To shareholders:		
Capital stock	$840,000.00	
Steamers renewal fund	25,000.00	
Repair and maintenance	13,000.00	
Marine insurance fund	7,000.00	
Profit and loss	42,099.41	
Dividend payable	63,000.00	
		$990,099.41
To the public:		
Accounts payable		2,736.76
		$992,836.17

PROFIT AND LOSS ACCOUNT

DECEMBER 31ST, 1906

Balance from 1905	$ 20,784.66	
Less appropriation for directors' fees	690.00	
		$ 20,094.66
Settlement of N.N. Co. vs. Estate J. J. Long, cash	$ 21,500.00	
Str. City of Windsor	9,000.00	
	$ 30,500.00	
Less law costs	2,750.00	
		27,750.00
Conscience money received	$ 213.00	
Dividend stock and bonds	85.00	
		298.00
Gross earnings of steamers	$606,950.20	
Less total expenditure	471,876.63	
		135,073.57
		$183,216.23
Less claims of 1903 paid 1906	$ 96.45	
" " 1904 paid 1906	2,311.70	
" " 1905 paid 1906	2,529.51	
	$4,937.66	
Loss on Monarch and expenses therewith	$ 11,051.67	
Written off special acct. linen and freight carriers	2,000.00	
Car demurrage	1,524.00	
Written off diving suit and piano	673.00	
Repair and maintenance account written off	9,202.49	
		$ 29,388.82
		$153,827.41
Less bonus to officers and employes	$ 3,728.00	
Less dividend at 6% per annum and bonus of 1½%	63.000.00	
		$ 66,728.00
		$87.099.41
Appropriations:		
Steamers renewal fund	$ 25,000.00	
Repairs and maintenance	13,000.00	
Marine insurance Georgian Bay steamers	7,000.00	
		$ 45,000.00
		$42,099.41

The officers and directors were re-elected for the current year as follows: President, H. C. Hammond; Vice-President, W. J. Sheppard; Secretary-Treasurer, C. E. Stephens; other directors: Hon. Lt.-Col. J. S. Hendrie, F. A. Lett, W. D. Matthews, H. P. Smith, H. Y. Telfer.

Eastern Canadian Passenger Association.—C. E. E. Ussher, on account of his removal from Montreal to Winnipeg, consequent on his appointment as Assistant Passenger Traffic Manager C.P.R., has resigned his membership in the Association, and has been elected as its first honorary member. The officers, etc., of the Association for the current year are: Chairman, G. Tombs; executive committee, W. Stitt, G. T. Bell, F. E. Barbour; rules committee, W. Stitt, G. T. Bell, T. Henry, F. E. Barbour, E. O. Grundy, F. F. Backus, J. W. Hanley, J. M. Lyons, W. Phillips; Secretary, G. H. Webster.

The Canadian Northern Ry. for failure to take the mails out of Edmonton, Alta., Jan. 8, was fined $5,000 by the Dominion Government.

The committee of the C.P.R. carmen's organization has completed an arrangement by which an advance of 10% has been secured for the men.

The Ontario Railway and Municipal Board has reduced one-half of the Niagara Suspension bridge assessment at Niagara Falls, Ont., from $175,000 to $135,000. The Board rejected the company's contention that as the upper half of the bridge was used exclusively for railway purposes it was not liable to assessment

Eastern Railway Entrance to Toronto.

The Department of Railways has under consideration an important problem affecting the interests of the G.T.R., the C.P.R. and the Canadian Northern Ontario Ry., in connection with their applications for the approval of plans for new lines east of Toronto. The G.T.R. is desirous of securing a better entrance into the city, with the object of reducing the gradient at Scarboro Heights; the C.P.R. has made surveys for a new line into the city, giving connection with the lake shore towns not now directly served by the G.T.R., and the Canadian Northern Ontario Ry. has prepared plans for its projected line from Toronto to Ottawa. In addition to the demand for additional main line accommodation, there are numerous applications for additional spur lines to accommodate the increasing numbers of factories in the eastern district of the city, and a call for the elevation of all the railway tracks in the city. Objection has been taken by residents of outside areas to so much cutting up of property for railway lines converging upon the city, and the City Council has taken up the whole question of railway accommodation in the east end of the city. The East End Business Men's Association has passed a resolution urging the construction of an independent line into the city, over which all railways be given rights. The Guild of Civic Art urges that the railways be compelled to keep their lines north of the Kingston Road. C. B. Smith, C.E., has been engaged by the city engineer to make surveys with a view of securing an alternative route so as to save Kew Beach and other of the beaches east of the city. When the question of the approval of the plans came before the Minister of Railways, Jan. 17, it was adjourned to March 18. The Minister suggested the appointment of an advisory committee of three engineers representing the municipalities, the railways and the Department, to consider the whole question with a view to minimize the injury to property, as well as to get good grades. The suggestion is being considered by the railways and the municipalities.

Reciprocal Demurrage.

The following resolution has been passed by the Montreal Corn Exchange: "Resolved, that the great loss and inconvenience suffered by the trade from the failure of railways to supply cars when requested, and from the intolerable delays which have occurred in transporting and discharging the cars into elevators after their arrival at terminal points, demand adequate compensation; that the Committee of Management of the Corn Exchange Association is hereby requested to associate itself with other commercial organizations interested in endeavoring to secure from the Railway Commission a ruling to the effect that demurrage charges shall be reciprocal, so that consignees shall have the equal right with the railways of collecting demurrage when cars are not promptly supplied, when there is any undue delay in transit or in placing cars for delivery on arrival in the freight yards, and in cases of undue delay in storing in elevators at stations where elevators are provided."

E. Brown, leader of the Liberals in the Manitoba Legislature, said Jan. 18: "Legislation providing for a reciprocal demurrage charge, by means of which the railway companies would be compelled to pay the farmer a fine because of the delay in furnishing cars, just as at present a farmer has to pay a demurrage charge if, after ordering a car he does not immediately use it, has been suggested. This, I think, would vastly improve the situation, but it might work out a hardship to the railway companies under certain conditions such as at present, for which some provision would have to be made."

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TORONTO, CANADA, FEB., 1907.

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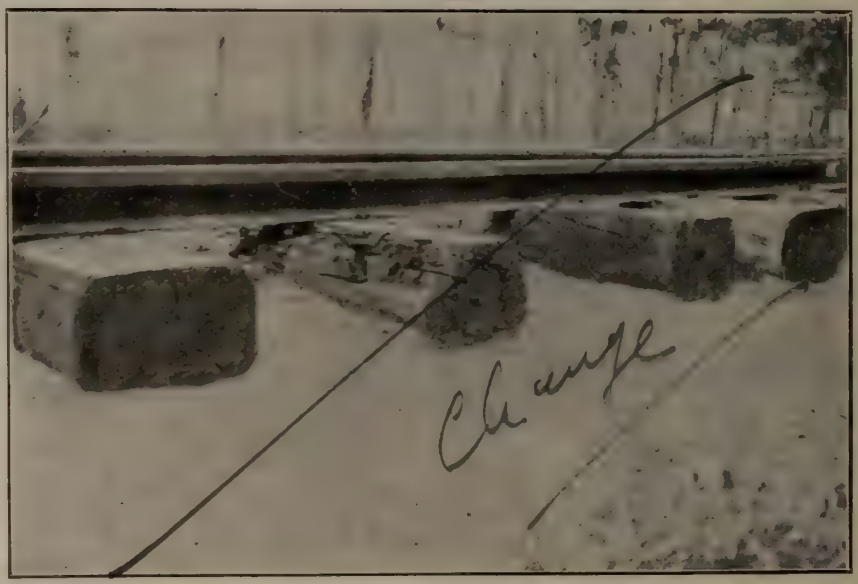

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Government Railways' Provident Fund.

Consideration is being given by the Dominion Parliament to a bill providing for the establishment of a provident fund for the employes of the Intercolonial and Prince Edward Island Railways. The object of the fund is declared to be for the purpose of providing life allowances to be paid to such persons as are entitled thereto under the provisions of the Act; the fund to be created by means of contributions to be made by the employes and the Government. The amount to be provided by the Government is not to exceed $100,000 a year, in such sums as the Governor-in-Council may determine to be necessary to maintain the fund; and the contribution of the employes is fixed at 3% of the monthly pay for the first month and 1½% per month thereafter. The fund shall be vested in the Crown, and 3% interest added thereto annually. The management of the fund is to be vested in a board of five persons, the General Manager being chairman; two members to be appointed from time to time by the Minister of Railways, and two elected annually by the employes contributing to the fund. The Board has power to make regulations for various purposes affecting the management and distribution of the fund within certain limits, and shall report to the Minister of Railways. The allowance to be paid shall be a monthly allowance of 1½% of the average monthly pay of the employe for ten years immediately preceding his retirement. The following classes of persons upon retirement shall be entitled to the allowance: Class A. Those who have attained the age of 70 years after being 15 years in the service; Class B. Those who have attained an age over 60 years and under 70 years, after being 15 years in the service and becoming physically or mentally incapacitated from performing the service required of them; Class C. Those who have attained the age of 65 years after being 15 years in the service, and request to be retired from the service; Class D. Those who, after being 25 years in the service, are permanently disabled from performing the service required of them as a result of injuries received while on duty and actually at work in the service; Class E. Those who, previous to the coming into force of this Act, entered the service at such an advanced age as to cause them to reach the age of 70 years before being 15 years in the service; provided that on attaining the age of 70 years they have been at least 10 years in the service. Other sections provide for the refund of payments made under various circumstances, etc.

The British Columbia General Contract Co. has been registered in the province of Saskatchewan, under the provisions of the act relating to foreign corporations.

D. Tremblay, light-keeper, Quebec; G. Bonner, light-keeper, Point Aconi, N.S., and G. Currie, light-keeper, Isle of Coves, N.S., have been given the Imperial service medal.

The Cowan Construction Co. has been incorporated under the Manitoba Companies' Acts, with a capital of $150,000 and offices at Winnipeg, for the purpose of acquiring and taking over as a going concern the railway contracting business now carried on in Manitoba under the style of W. J. Cowan P Co. and W. J. Cowan, including the contracts, plants, assets, etc., of the firms (but not including the interests of W. J. Cowan in connection with his contract on the line between Erwood and Pas Mission); to engage in general contracting work and various other allied businesses. The provisional directors are W. J. Cowan, D. R. Campbell, P. C. Andrews, C. G. Cowan, and F. W. Tisdale, of Winnipeg.

ELECTRIC RAILWAYS.

Electric Railway Track Laid in 1906.

The figures relating to the new track laid by the electric railways of Canada in 1906, as published in our January issue, continue to be incomplete, owing to the neglect of several companies to furnish statements. Using approximate figures from companies which have not reported, additional track was laid by nine companies, the total new mileage being 93.32. Of this, 88.42 miles were laid in Toronto, Quebec and British Columbia:

	Miles.	Miles.
BRITISH COLUMBIA ELECTRIC RY.—Various extensions (Approximate).		2.00
LONDON STREET RY.—Extensions within London, Ont.		1.90
MONTREAL PARK AND ISLAND RY.—From main line to rail track.		0.59
MONTREAL STREET RY.—Various extensions on city streets.		2.31
NIAGARA, ST. CATHARINES AND TORONTO RY.—Falls View to Toronto Niagara Power Co.'s right of way	1.00	
St. Catharines to Fonthill (Approximate)	4.00	
		5.00
TORONTO AND YORK RADIAL RY.—Metropolitan Division, Newmarket to Jackson's Point, Ont.	24.40	
Scarborough Division, Halfway House to Highland Creek, Ont.	4.30	
Mimico Division, Long Branch to Port Credit, Ont.	4.00	
		32.70
TORONTO RY.—Various extensions, length in single track		9.82
SOUTH-WESTERN TRACTION CO.—Lynhurst to St. Thomas, Ont.	1.00	
St. Thomas towards Lake Erie.	8.00	
		9.00
WINDSOR, ESSEX AND LAKE SHORE RAPID RY.—From Windsor to Kingsville, Ont., (Approximate)		30.00
		93.32

Electric Ry. Finance, Meetings, Etc.

Berlin and Waterloo Street Ry.—The arbitrators, Judge Morgan, Toronto; Judge Jamieson, Guelph; and J. M. Scully, Waterloo, Ont., handed in an award in the proceedings initiated by the Berlin Town Council asking to have a price fixed for the railway, etc., of the B. and W. St. Ry. The award was taken up by the corporation, the price fixed being $75,200, with costs of $3,000.

Application will be made at the current session of the Ontario Legislature for an act declaring that the corporation of the town of Berlin may, upon the payment of $75,200, being the amount of the award delivered by the arbitrators as above mentioned, take over the property and effects of the company as set out in the award; empowering the corporation to pay any further sum which may be fixed upon appeal from the said award, and declaring that the payment of $75,200 shall not prejudice the right of the corporation to appeal; authorizing the borrowing of the money to pay the award without first obtaining the consent of the ratepayers; empowering the corporation to pass by-laws for the management of the railway, and to place the railway under the management and control of the Light Commissioners, and other necessary powers.

Halifax Electric Tramway.—Railway receipts for Dec. $13,751.41, against $12,642.40 for Dec., 1905. Total receipts railway, electric light and gas for Dec., $38,604.73, against $36,702.75 for Dec., 1905.

The percentage payable to the city upon the company's gross passenger receipts from May 1 to Oct 31, 1903, was reported to the City Council, Jan. 11, to be $3,866.06.

Hamilton, Grimsby and Beamsville Ry.—The directors have announced that no dividend will be paid for the last financial year. It was expected when the adjourned annual meeting was held, Jan. 28, that a statement would be made showing that the control of the company had been acquired by the Hamilton Cataract Light, Power and Traction Co.

Montreal Street Ry.—Passenger earnings for Dec., $262,334.37; total earnings $366,953.33, against $234,710.30 passenger, and $236,945.59 total for Dec., 1905. Operating expenses, $185,571.22; city percentage on earnings, $8,189.93; interest on bonds and loans, $16,615.07; contingent for renewals, $13,361.95; surplus $42,260.16, against $161,995.10 operating expenses; $8,363.84 city percentage on earnings; $14,246.73, interest on bonds and loans; there was no contingent fund in Dec., 1905; and $52,339.92 surplus in 1905. Net earnings for three months ended Dec. 31, $295,603.02; surplus $176,594.79, against $262,065.54 net earnings, and $196,318.16 surplus for same period 1905.

Niagara Gorge Rd.—Following are the officers and directors for the current year: President, J. T. Jones; Vice-President, H. B. Bissell; Treasurer and General Manager, B. L. Jones; Secretary and Assistant Treasurer, R. E. Powers; other directors, J. A. Jones, F. V. Greene, W. H. Hotchkiss, W. G. Case, R. R. Hefford, C. M. Bushnell, and G. C. Riley. At the annual meeting held at Niagara Falls, N.Y., Jan. 3, only routine business was transacted. The financial reports are not made public.

Ottawa Street Ry.—It has been announced that the dividend for the year 1906 will be at the rate of 8%, and there will also be a bonus of 4%. This is the largest distribution of profits in the history of the company.

Toronto Ry.—Car earnings for Dec. $269,058.41, against $241,489.22 for Dec., 1905.

Projects, Construction and Betterments.

Barrie, Ont.—A vote was taken at Barrie Jan. 7, upon a proposal to grant a franchise to a syndicate of which F. Nicholls, Toronto, is the head, to construct an electric railway in the town. A majority of 43 in favor of the proposal was recorded, but Mr. Nicholls said the syndicate had decided not to proceed any further with the project at present. (Nov., 1906, pg. 675).

Brantford and Hamilton Ry.—An officer of the Hamilton Cataract Power, Light and Traction Co. was quoted, Dec. 29, as saying that that company was behind the B. and H. Ry. (Jan., pg. 45).

British Columbia Electric Ry.—A third party, in charge of F. N. Sinclair, has been sent out to make a survey into the Clover Valley district in connection with the projected electric railway between New Westminster and Chilliwack. H. N. Smith has charge of the first party, and C. P. Moss is in charge of the second, the whole of the projected route now being covered.

An announcement has been made that construction will be commenced at an early date by the C.P.R. upon a line from New Westminster to Eburne. The line will be electrically equipped by the B.C.E. Ry., and will be operated by it. (Dec., 1906, pg. 753).

Buffalo, Niagara and Toronto Ry.—Plans have been filed for the construction of this line from Niagara-on-the-Lake, via St. David's, to St. Catharines, Ont. (Oct., 1906, pg. 597.)

Edmonton, Alta.—The Edmonton Commissioners have placed an order for 470 tons of 80-lb. T rails, delivery to be made from March, for a city owned electric railway, and it is said that construction will be started at an early date. (Dec., 1906, pg. 753).

Grand Valley Ry.—Application will be made at the current session of the Dominion Parliament for an act authorizing the company to construct a line from Woodstock to and through Ingersoll, to and into London, Ont., and to increase the company's capital. The manager states that the report that the line had been sold to Pittsburg, Pa., people is incorrect, but it was true that U.S. capitalists had inspected the line with a view of purchasing it, as well as the Woodstock,

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Thames Valley and Ingersol Ry., owned by the same interests. The company had under consideration the extension of the line to Burford, Simcoe and Port Dover, Ont. (Sept., 1906, pg. 549).

Halifax and Suburban Electric Co.—A company has been organized in Halifax, N.S., with this title for the purpose of constructing an electric railway from Halifax through Rockingham, Bedford and Sackville to Waverley, N.S. The company, it is stated, has secured the charter of the Bedford Electric Co., which was incorporated by the Nova Scotia Legislature in 1903, with power to construct an electric railway within the territory named. The promoter is H. E. Harding, of St. John, N.B., who is said to have interested U.S. capital in the project, and the Halifax directors of the company are G. E. Boak, ex-Mayor Keefe, and W. Chisholm.

Hamilton Radial Electric Ry.—Application is being made at the current session of the Dominion Parliament for an act authorizing it to extend its lines to Toronto, and to obtain terminal facilities there; to extend its line from Hamilton to Brantford, Woodstock and Windsor, Ont.; to make running or traffic agreements with the Hamilton, Ancaster and Brantford Ry., the Hamilton, Grimsby and Beamsville Ry., and other electric railways; and to construct electric railways generally in the county of Wentworth. It is also desired to have the company's undertaking declared to be one for the general advantage of Canada, and to have its bonding powers increased from $20,000 to $30,000 a mile. (Dec., 1906, pg. 753).

Manitoba Radial Ry.—In addition to the powers asked for in the original application for an act of incorporation now before the Railway Committee of the House of Commons, it is proposed to ask for power to extend the projected line from Lundar to the shore of Lake Winnipeg at or near the Hudson's Bay Co.'s post in the district of Keewatin. (Dec., 1906, pg. 753.)

Moncton, N.B.—The Legislation Committee of the City Council has recommended that a charter be secured at the next session of the N.B. Legislature to operate a street railway in the city and in the parishes of Moncton and Shediac. The report is under consideration. A street railway was formerly operated in the city, but it did not succeed and was taken up in 1901. (Nov., 1906, pg. 675).

Mount McKay and Kakabeka Falls Ry.—Plans and profiles have been approved by the Ontario Railway and Municipal Board for the construction of a railway from Fort William to Mount McKay and Kakabeka Falls. The officials of the company include: Vice-President, W. F. Hogarth; Chief Engineer, J. L. Davidson, of Fort William.

Niagara, St. Catharines and Toronto Ry.—A contract is reported let to Jos. Battle for the extension of the line from Fonthill to Welland, Ont., five miles. The company is making surveys for a line from St. Catharines to Niagara-on-the-Lake. (Dec., 1906, pg. 754).

Ottawa River Ry.—The Ontario Legislature will be asked at its current session to pass an act extending the time for the commencement and completion of this railway, and changing the location of the western branch to run south of Lake Simcoe towards London, Ont. Hogg and Magee, Ottawa, are solicitors in the matter.

Petrolia Rapid Ry.—The Ontario Legislature will be asked at its current session for an act extending the time for the commencement and completion of the authorized line, and for power to extend the lines as follows: from Petrolia to London, from Brigden to Wallaceburg, and from Courtright to Wallaceburg, Ont. T. J. Gordon, Sarnia, Ont., is Secretary.

Port Arthur Electric Street Ry.—The Port Arthur corporation will apply at the current session of the Ontario Legislature for an act confirming a number of by-laws, and conferring on it various powers, including the following: To double-track the electric street railway, and to construct a belt line railway as an extension of the same, upon the passing of the necessary by-law or by-laws by the taxpayers, and to authorize the operation of the electric street railway on Sundays. (May, 1906, pg. 277.)

Quebec and Isle of Orleans Ry.—The members of the company which is applying at the current session of the Quebec Legislature for an act incorporating a company with this title to construct a railway from Quebec, round the Isle of Orleans, with a bridge to the Beaufort shore, are Hon. E. B. Garneau, P. Corriveau, F. Turcot, E. Laliberté, D. O. Lesperence, of Quebec. (Jan., pg. 5.)

Sandwich, Windsor and Amherstburg Ry.—Application will be made at the current session of the Ontario Legislature for an act authorizing the S.W. and A. Ry. and the Windsor and Tecumseh Electric Ry. to agree with one another for connections, or to make running arrangements, or enter into an agreement for the sale or lease of any portion of the last named railway; to authorize the S.W. and A. Ry. Co. to acquire the capital stock, bonds or other securities of the W. and T.E. Ry. Co.; to empower the S.W. and A. Ry. to supply power to the W. and T.E. Ry.; to extend the time for the completion of the W. and T.E. Ry.; to confirm and validate the proceedings of the provisional directors of the W. and T.E. Ry.; to confirm a mortgage of the W. and T.E. Ry. to the International Trust Co. of Boston, Mass., and to change the head office of the W. and T.E. Ry. from Walkerville to Windsor, Ont (May, 1906, pg. 2 7, Windsor and Tecumseh Electrical Ry., Dec., 1906, pg. 753.)

Stratford and St. Joseph Radial Ry.—The Dominion Parliament is being asked at its current session for an act incorporating a company with this title for the purpose of constructing a railway of any gauge, to be operated by steam, electric, gasoline or any other kind of motive power, for the conveyance of passengers and freight from Stratford to St. Joseph, Ont., passing through Fullarton, Russeldale, Farquhar, Exeter, Hensall, and Zurich; and from St. Joseph to Grand Bend, or from Exeter westerly to St. Joseph and on to Grand Bend and Park Hill, with power to construct branches. It is also desired to have power to construct telegraph and telephone lines, to generate and sell electric power and to operate ferries in connection with its railway. The company desires that its undertaking be declared to be for the general advantage of Canada. J. U. Vincent, Ottawa, is solicitor for the applicants.

N. M. Cantin, St. Joseph, Ont., the principal promoter of this company, is reported as saying that the branch from St. Joseph to Parkhill to get a connection with the G.T.R., will be built at once. If Stratford will give a civic franchise the line to that city will also be built at an early date. The men interested in the project include: H. G. Lajoie, J. H. Laurandeau, S. Vincent, L. G. Routhier, J. P. Prudhomme, J. M. Lavoie, Dr. Chevrier, of Montreal, and some Buffalo and New York men, whose names are not given.

Suburban Electric Ry.—Application is being made at the current session of the Manitoba Legislature for an act incorporating a company with this title for the purpose of constructing a railway of standard or other gauge, to be operated by steam, electric, gasoline or other power, from Winnipeg westerly and northerly to Lake Manitoba; to generate electric power, to construct telegraph and telephone lines, to operate ferries, to lay out parks and pleasure grounds, to conduct hotels, and to enter into contracts with other similar companies. Morley and Suffield, Winnipeg, are solicitors for the applicants.

Suburban Tramway and Power Co.—The parish of Longue Pointe is applying at the current session of the Quebec Legislature for an act confirming a number of by-laws, among them being one to confirm the Suburban Tramway and Power Co. in the possession and enjoyment of the right of way which was granted for the tramway.

Toronto Radial Railways.—The Mayor of Toronto has written to the suburban railway companies asking them to reply to the proposition made by the City Council some time ago, as to conditions under which they would be permitted to enter and operate in the city.

Twentieth Century Transportation Co.—A company with this title is making a proposal for a ferry franchise between Windsor, Ont., and Detroit, Mich., says it desires to construct an electric railway from Buffalo, N.Y., to Detroit, Mich. The projected line would run by way of Welland, St. Thomas and Ridgetown, Ont., and the ferry franchise was desired so that a through fare could be made between the two U.S. points. The names of the promoters have not been made public.

Woodstock and Houlton Electric Ry.—The New Brunswick Legislature will be asked next session for an act incorporating a company with this title with power to construct an electric railway from Woodstock, N.B., to the International boundary in the parish of Richmond, Carleton county, J. N. W. Winslow, Woodstock, N.B., is solicitor for the applicants.

Windsor and Tecumseh Electric Ry.—See Sandwich, Windsor and Amherstburg Ry.

Electric Railway Notes.

J. Doucette, Superintendent of the Hamilton Cataract Power, Light and Traction Co., died in Hamilton, Ont., Jan. 9.

A. Oldfield, resident engineer, Winnipeg Electric Street Ry., will be married to Miss L. Houlton, of Hyde Park, Leeds, Eng., at an early date.

The Montreal Street Ry. has under construction 25 of a new type of car, and, it is reported, will place an order for 20 more for delivery in July.

A. N. McLennan, Manager Sydney and Glace Bay Ry., Sydney, N.S., was presented with a walking cane and an address by the employes recently.

The investigation into the condition of the Hamilton Street Ry. by the Ontario Railway and Municipal Board was completed Jan. 4, but it is not expected that judgment will be delivered for some time.

The appeal of the Hamilton Street Ry. Co. to the Supreme Court in the action in which it sought to have a regulation limiting the sale of workmen's tickets, was dismissed with costs. The City Council claimed that the sale of these tickets must be unrestricted.

The question of providing vestibules on street cars is being considered by the Ontario Railway and Municipal Board, upon the application of the employes of the Toronto Ry. Three cars were fitted with samples and inspected by the Board and the men, so that the best may be selected.

The C.P.R., owning the Hull Electric Ry., has arrived at an understanding with the Hull, Que., City Council, as to various matters in dispute, and the actions entered will be withdrawn. Freight hauling is to be continued during the winter, and in the spring a loop line is to be constructed which will do away with the necessity of hauling freight over the line in future.

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The Power House.

By J. C. Rothery, General Manager East Liverpool, Ohio, Traction and Light Co.

This subject is so large and has such an important bearing upon electric traction, being the foundation of the whole system, that only a few salient features can be touched upon By reason of the higher voltages generated in modern power stations, it is no longer a necessity for a power-house to be situated in immediate proximity to the point where the power will be utilized. This is particularly advantageous in larger cities, as it may be built upon cheaper land, nearer the water and coal supply, and where the best railway shipping facilities are available, taxes low and insurance rates at a minimum. The buildings should be of fireproof construction throughout. In this connection, many power houses, both steam and hydraulic, are being constructed of reinforced concrete, walls, roofs, floors and partitions, thus rendering the building absolutely fireproof. A notable example of this construction in a hydraulic power-house is that of the Ontario Power Co.'s generating and distributing stations at Niagara Falls, Ont.

Water tube boilers of the Babcock and Wilcox type predominate in modern power stations, and the tendency is towards the use of large units in order to economize space and labor, the most popular sizes ranging from 400 to 500 h.p. All plants of 1,500 h.p., or over, can economically operate mechanical stokers. These will generally make such a saving in fuel and labor as will not only pay interest upon the investment, but will in a short period return the principal. Coal conveyors which will take the fuel directly from the cars, place it in overhead bins so that it will flow by gravity to the stoker hoppers, is an essential feature in the economical operation of a modern power-house. A similar conveyor may also be utilized for the removal of ashes and thus a still further saving obtained in the handling of fuel.

Modern plants which are unable to obtain soft water, may install purifying tanks, into which the water is pumped, a certain proportion of chemicals adapted to that particular water being added, thus causing all inorganic matter to settle, the pure soft water being used in the boilers. The modern practice of installing pumps is in groups, ample clearance being allowed between the units, and the grouping plan permits the widest flexibility in case of trouble. If all of the power feed pumps are installed in a row in a separate pump room, the piping can easily be arranged to enable any pump to take up the load. Air and circulating pumps are generally installed in the basement close to the condensers which they serve, but there is often not the same opportunity for co-ordinating them in a group with the feed, oil, step-bearing pumps, etc., that there is when the pumps are located in a separate compartment on the floor above. The pump installation should, in any event, be placed well under the control of the operators, and the plan of segregating this equipment in a group apart from the boilers and engine room apparatus, is well worth bearing in mind in the designing of a new plant.

The majority of the power stations being built at the present time are installing steam turbines instead of reciprocating engines, of a capacity from 1,000 kw. upwards. Current is being generated as low as four and one-half mills per kw. hour with this type of equipment; this is at least one mill per kw. hour less than has been obtained with reciprocating engines of the best type, the steam turbine plant having an inherent economy 20% better than the best type of reciprocating engine plant.

Direct current generators and d.c. transmission is being superseded by alternating current transmission, employing a potential of from 13,000 to 33,000 volts, thus interurban railroads having from 100 to 200 miles of track are being economically operated from a central power station. A notable example of such centralization is the Indiana Union Traction system, its power house being situated at Anderson, Ind., and the farthest point served is Lima, a distance of 85 miles, the transmission potential being 33,000 volts. In most modern plants, particularly those in course of construction, provision is made for superheating the steam supply of the turbine or reciprocating engine equipment. For this purpose, an independently fired superheater is installed in the boiler room, directly connected to the main steam heaters in such a manner that by opening and closing certain valves, all steam on its passage from the boilers to the engines may be deflected through the superheater, raising the temperature thereof and eliminating all moisture. Where alternating current is generated and transmitted under high voltage to sub-stations, the switches for transferring the current for the feeders and the leads to the main transformers are three and four-pole for three and two-phase current, with two stationary contacts per pole, one from the transformer, the other from the buss bar of the same phase. The connections between the switch terminations of these leads is made by raising into contact with them, against the force of gravity, a bridging piece which is held against the contact mechanically. The contacts are submerged in oil, the bridging piece of each pole of the switch being at the power end of a heavy, vertical rod, each of the oil circuit breakers being enclosed in a separate, fireproof chamber of brick, capped with a slab of stone, upon which the bearing gear is mounted, the front of each compartment being enclosed by a cover of asbestos board, held in place by eccentric clamps. The position of the switch is indicated to the operator by means of a red and green signal lamp placed on each side of the switch handle upon the control stand, the signal lamps being lighted by current from the exciter or station transformer, and the lamp circuit closed there by a little wicket type, double throw, knife switch on top of the oil switch structures, which is thrown to the one side or the other in opening or closing the circuit. This operates the relay coils which work the automatic control in each circuit breaker. The buss junction and buss connecting switches are non-automatic and are operated by hand. The release is mounted upon a panel with volt and ammeters which are a part of an a.c. operating switchboard. Direct current switchboards are marble or slate panels of the standard direct current type. They are usually situated separately from the high tension and within reach of the same operator who takes care of the a.c. board.

Most station transformers are of the air blast type, electric driven blowers furnishing the necessary draught. The fans are built to deliver from 10,000 to 18,000 ft. of air a minute at 700 Fahrenheit against a maintained pressure of about one ounce per square inch. They are operated by a. c. motors of from six to ten horse-power at 450 to 500 revolutions a minute. They are generally full housed with horizontal top or bottom discharge, and with one or two spiders carrying all the blades. Many station buildings are being furnished with air cleaning sets. These consist of a steam or motor driven compressor supplying a system of air piping running to outlets, conveniently placed to the various machines. The air pressure utilized for cleaning electrical machinery is usually from 30 to 40 lbs., a higher pressure, unless very carefully handled, being liable to injure the insulation of the armatures and fields. Any individual unit may be operated as follows: 1. High pressure and low pressure cylinders in series, condensing or non-condensing. 2. High pressure cylinder in service, alone. 3. Low pressure cylinder in service, alone. The most economical steam pressure has been found to be from 150 to 175 lbs. per square inch.

When installing a system for lubrication, the oils should be fed to bearings by gravity from an overhead oil reservoir. After passing through the bearings it is piped to filters in the basement, and after being filtered raised by means of pumps again to the overhead reservoir, and thus constant circulation is maintained with very little loss.

In designing a new plant, the machinery should be systematically grouped, and placed as closely together as is consistent with safe operation, in order that additional units may be installed, so as to secure joint or independent operation whichever may be desired. When the unit system is used, the line of future extension is foreseen so that rearrangement of the original installation is not necessary.

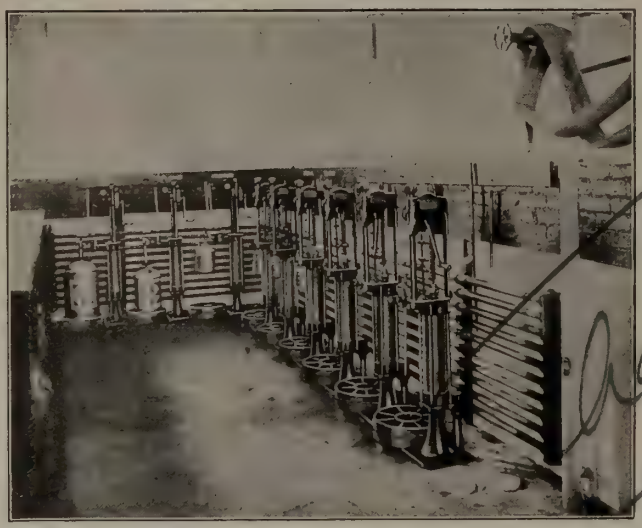
The so-called unit principle where each group of boilers, engines, turbines, and pumps, constitute in reality a separate operating station, using a common set of buss bars, offers the greatest advantage in economical operation and convenience of enlargement when increased capacity is desired.

Hamilton Electric Railway Employes' Agreement.

As the terms of the settlement of the strike of the employes of the electric railway lines owned by the Hamilton Cataract Power, Light and Traction Co. are of considerable importance to other companies, they are given very fully below. Following is the decision of the Ontario Ry. and Municipal Board:

"Whereas a certain agreement of reference dated Nov. 28, 1906, was made between the Hamilton St. Ry. Co., the Hamilton Radial Ry. Co., and the Hamilton and Dundas St. Ry. Co., and the Amalgamated Association of Street and Electrical Railway Employes of America, division 107, Hamilton, Ont., in the following words: 'We hereby agree to refer all matters and disputes between us to the Ontario Ry. and Municipal Board unconditionally.' And whereas the Board having taken upon themselves the burden of the said reference, and having duly weighed and considered the several allegations of the parties, and also the proofs, vouchers and documents which have been brought before the Board, and having heard what was alleged by the representatives of all parties. The Board on Nov. 30, 1906, awarded, adjudged and directed as follows: 'The Board, in order to serve the comfort, convenience and best interests of all classes of the community hereby orders the strike off and orders and directs all the men now out on strike to return to their respective employment, and also orders and directs the companies to receive the men back, and the companies are forthwith to put a complete service in operation.' The Board further awards, adjudges and directs said parties to sign and execute the agreements, copies of which are hereto annexed. The Board further awards that each of the said parties should pay his own costs of this reference.

Following is the agreement between the Hamilton Street Ry. Co. and the Amalgamated Association of Street and Electrical Railway Employes of America, Division



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107: "In the operation of the lines of the party of the first part both parties hereunto mutually agree, as follows:

"1. That the Company through its properly accredited officers will continue to treat with its employes, who are members of the Association, through the properly accredited officers and committees of said Association.

"2. That during the continuance of this agreement the wage scale shall be as follows: Motormen and conductors shall be paid for the first year's service at the rate of 16c. an hour, for the second year 18c. an hour, and after the second year's service they shall be paid 20c. an hour. Machinists, blacksmiths and linemen shall be paid 20c. an hour. Shopmen shall be paid at the rate of 15c. an hour for the first year's service, 16c. an hour for the second year, 17c. an hour for the third year, and 18c. an hour thereafter. Carpenters, painters, armature winders, blacksmiths, helpers, trackmen and watchmen to be paid the same rate of wages as at present.

"3. All extra motormen and conductors who report at car barns and relief changes shall be guaranteed a minimum wage by the Company of $6 a week, but should an extra motorman or conductor fail to report at any time during the week, then the Company will not be required to guarantee the $6 a week.

"4. For all work performed by motormen, conductors, linemen, shopmen, machinists and blacksmiths over schedule time, and for all work performed on Sundays, they shall be paid at the rate of 2c. an hour extra.

"5. All work for extra men shall be divided as near as practicable equally among them.

"6. In order to establish a work day for motormen and conductors that will meet the Deering and other tripper conditions that prevail on the system, or may arise from time to time in the future, there shall be established: 1st. The priority system of dealing out runs; each motorman and conductor to hold his promotion in accordance with his continuous age in the service, they to have the right to select their runs in accordance with their age in the service of the Company. All runs to be posted for motormen and conductors to make their selection as to the run they may desire, at least once in each three months, commencing with Jan. 1 in each year. Should there be a vacancy between the periods of selection the men below such vacancies shall have the right to move up in accordance with their age in the service on the first of each month. 2nd. All runs shall be scheduled and divided in such manner as to give as many regular day runs as possible of 10 hours each, to be completed inside of 12 consecutive hours, with a lee way of a half trip to complete schedule. 3rd. As many runs as possible shall be scheduled and divided into runs to be known as late regular runs of 10½ hours work day, to be completed inside of 12½ consecutive hours, with a lee way of 15 minutes to complete the schedule. 4th. The balance of the runs to be known as swing and mixed runs, and to be scheduled in the shortest number of hours possible to arrange them. The swing runs to be a 12 hour work day, and to have at least one day off each week. The mixed runs to be at least a 10 hour work day. That whenever the organization, through their committees, can show to the Company that a greater percentage of the runs can be advanced from swing and mixed runs to regular early and late runs, as specified above; the change giving the same service desired by the Company; they shall have the right to do so, and on the presentation of these changes to the Company the same will be adopted by them and put into effect.

"7. In cases where employes are required by the Company to secure evidence in connection with accidents, collisions, or for any other cause, or are taken off duty by the Company to give evidence in legal or other matters, said employes shall be paid for the loss of such time at the same pay they would have received had they been working at their regular employment.

"8. Conductors to be supplied by the Company with a sufficient quantity of tickets to run their cars, providing the said conductor pays to the Company one-half of the cost of a guarantee bond covering the amount of tickets furnished.

"9. Any member elected or appointed to an office in the Association shall be permitted to serve in such official capacity without prejudice to his service or line of promotion in the employment of the Company. If a shopman is elected or appointed to office in the Association, he shall not act except when questions of interest to shopmen are concerned.

"10. In case any member of the Association is suspended or discharged for any cause whatsoever, the Company, through its manager, upon request in writing, shall grant an interview to the grievance committee and if, upon investigation, it is found by the manager that the man is not at fault, he shall be reinstated in his former position and paid for all time lost, in the discretion of the President to whom the matter can be referred.

"11. All differences between the Company and the Association shall be adjusted as follows: 1st. Any and all differences or disputes arising between them shall be submitted through the properly accredited committees of the Association to the Traction Manager of the Company in writing, and if they cannot agree the President or General Manager may be called into conference.

"12. Every motorman and conductor, who has been continuously in the Company's employ for six months prior to the letting of the contract for uniforms, shall be supplied with a uniform suit upon the following conditions: (a) It is understood and agreed that the Association, if they so desire shall have the right to purchase uniforms in the open market, but the style and color and finish are to be subject to the Company's approval, and the Company agrees to pay one-half the cost of uniforms for all men who have been in the employ of the Company six months prior to the letting of said contract. (b) It is further agreed that in case any employe leaves the service of the Company within one month after receiving his uniform, the Company retains from his wages the said one-half cost of his uniform, and any employe leaving the service of the Company within three months of the time of receiving his uniform, the Company may retain from his wages one-quarter of the cost of said uniform.

"13. The Company will fit all 10 bench open cars with eaves on both sides, the said work to be done before the cars are put in service for the season of 1907.

"14. In case of a breakage or other damage to cars while in the custody of employes, they will be liable only for such breakages or damages as have been caused by their negligence or their carelessness, any payment in respect of damage so caused to be not greater than half the actual cost of the repair thereof.

"15. This agreement and all provisions contained therein shall remain in force and be binding on the respective parties until April 1, 1909."

The agreement between the Hamilton and Dundas St. Ry. and the Hamilton Radial Electric Ry. companies and their employes are very similar to the foregoing. In the Hamilton and Dundas Ry. Co.'s agreement no change was made in the rate of wages, which remained the same as before for motormen and conductors, viz., 14c. an hour for first year' sservice; 16c. an hour for second year; 18½c. an hour for third year and thereafter, and 2c. an hour extra for extra work over schedule time and on Sundays. In the Hamilton Radial Electric Ry. Co.'s agreement the previous rate of wages was maintained, viz., 14c. an hour for first year's service; 15c. an hour for second year; 16c. an hour for third year; 17c. an hour for fourth year and thereafter, and 2c. an hour extra for extra work over schedule time and on Sundays.

Grain Elevator Notes.

Over 12,000,000 bush. of grain were transhipped at Kingston, Ont., during the season of navigation of 1906.

An agitation has been started in Alberta, with a view of having a system of elevators owned and operated by the provincial government.

The British America Elevator Co. has been registered in the Province of Saskatchewan, under the provisions of the act relating to foreign corporations.

The Vancouver Board of Trade, at a meeting held Jan. 3, expressed an opinion in favor of the establishment of a grain elevator having a capacity of 250,000 bush., at that port, by the Dominion Government.

The Grand Trunk Pacific Elevator Co., incorporated under the Dominion Companies' Act, has been registered in Ontario under the act respecting the licensing of extra provincial corporations. W. L. Morton, solicitor, Fort William, Ont., has been named its Attorney.

We have been advised that arrangements have not been completed for the rebuilding of the workhouse at the C.P.R. elevator D, Fort William, Ont., which was recently burned. The plans for the new building are being prepared in the company's engineering department.

Figures compiled at Winnipeg show that there are over 1,200 elevators at interior points in Manitoba, Saskatchewan and Alberta. Notwithstanding the largely increased number of elevators as compared with 1905, they were insufficient to handle the grain crop of the year.

An agitation has been started in Minneapolis, Minn., for the purpose of having special wheat trains from Canadian points to that city run regularly between Sept. 1 and Feb. 1. A. L. Porter, Hanley, Sask., is representing the Northwestern grain growers in connection with the movement.

The International Waterways Commission concluded a two days' joint session at Toronto, Jan. 5, at which an agreement was reached by which the city of Chicago is to be allowed to divert a certain quantity of water from Lake Michigan for the purposes of the Chicago drainage canal; and recommending that on account of the inaccuracy of existing charts the International boundary along Lake Erie be surveyed either by the Commission or by some other authority to be appointed specially for that purpose. The next question which will be discussed by the Commission will be the construction of dams at the lower outlet of Lake Erie so as to raise the levels. Lake marine interests have been urging the matter for a considerable time, but no definite plan has been suggested. In connection with the report R. Bickerdike, M.P., will bring before Parliament a question of the effect that the diversion of so much water to the Chicago drainage canal will have on the level of water in the St. Lawrence.

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MARINE DEPARTMENT

Trolley Tug Boat at Niagara Falls.

A trolley propelled tug boat is operated by the Canadian Niagara Power Co. at its works, Niagara Falls, Ont. The hull is of wood, 40 ft. long, 10 ft. beam, and 6 ft. draught, the propeller being 5 ft. in diameter. The electrical equipment consists of a 125 k.w. air blast transformer with ratio of reduction 1,100 volts to 220 volts. There are several low voltage taps on the transformer which are used for bringing the motors up to speed or for running at a reduced speed. There are two motors, known as Westinghouse no. 106 alternating current design, to develop 75 h.p. each at a speed of 1,050 revolutions. This type of motor was developed by the Westinghouse Co. for alternating current street railway service. The motors are geared to the extension of propeller shaft through pinions and gears having a ratio of 16 to 66, thus at full load the motors will develop 150 h.p. at about 1,000 revolutions of armature, or 240 revolutions of the propeller shaft. The motors and transformer, which are located on the boat, are arranged to be cooled with forced draught supplied by a 1 h.p. alternating current motor direct connected to a blower. Air pipes with suitable dampers for properly distributing the air flow lead from the blower to the motor and transformer cases. In this manner cold air is forced through the portion of the motors and transformers near the windings. This is especially necessary in a boat equipment, as the hull offers very little opportunity for radiation necessary in all self-cooled electrical apparatus. The trolley structure consists of two no. 2/0 trolley wires supported parallel to each other and 2 ft. apart at a distance of 60 ft. above the water. The trolley wire extends the entire length of the forebay, a distance of about 600 ft. These trolley wires are secured through strain insulators and current at a voltage of 1,100 volts is conducted to them by duplex no. 3/0 lead sheathed cable, which is brought up to the trolley wires alongside of one of the guy rods of the trolley poles. Power for operating the boat is supplied from the main switchboard at 11,000 volts and is stepped down through a 125 k.w. water-cooled transformer having a ratio of 11,000 to 1,100 volts. Suitable meters, switches, circuitbreakers, etc., are installed in the 1,100-volt circuit for the purpose of controlling the current and measuring the power used by the equipment. The hull was constructed in Buffalo, N.Y. The electrical equipment was supplied by the Canadian Westinghouse Co. The installation of the machinery in the boat and the construction of the overhead trolley equipment was carried out by the Canadian Niagara Power Co.'s engineers.

A New Steamship Route.

The Great Britain, Ireland and Canada Express Route is the title of a syndicate formed in London, Eng., for the purpose of establishing a fast line of steamers between Blacksod Bay, County Mayo, Ireland, and Halifax, N.S., with the necessary railway connection in Ireland. It is stated that Chaplin, Milne and Grenfell, bankers, London, Eng.; Linton-Clarke Co., engineers, Glasgow, Scotland; Vickers, Son & Maxim, shipbuilders, Barrow-in-Furness, Eng.; and Swan & Hunter, shipbuilders, Newcastle-on-Tyne, Eng., are interested in the project, and that Lord Strathcona has intimated his willingness to take stock to the extent of $500,000 in the company. As set out it is proposed to establish a line of steamers capable of crossing the Atlantic in 3½ days at an average speed of 25 knots an hour; to establish ferries between the east coast of Ireland and the west coast of Scotland by means of steamships so constructed as to be capable of conveying passenger and goods trains entire from port to port without disturbing passengers or unloading trucks; the construction of such railways as may be necessary in conjunction with existing lines; to provide for an express passenger service between Blacksod Bay and the east coast at a speed of not less than 50 miles an hour.

The cost of four steamers necessary to maintain a service of two trips a week each way, with a fifth steamer ready for emergencies, is estimated at £4,000,000. The ocean distance between Blacksod Bay and Halifax is 2,100 miles, and with 25-knot steamers the ocean service as suggested could be maintained. The present nearest railway point to Blacksod Bay is Collooney, on the Midland, Great Western Ry., a distance of 88 miles, and the estimated cost of the construction of this line is put at £880,000 as a single line. The existing line between Collooney and Enniskillen is not in a fit condition for traffic such as is proposed, and unless it was brought up to the standard of the projected line, a new line would have to be constructed. Between Enniskillen or Clones and Belfast, the proposal is to obtain running powers over the Great Northern Ry. of Ireland. In Belfast it would be necessary to construct a connection between the Great Northern Ry. and the Belfast and Northern Counties Division of the Midland Ry. of England, over which running powers would be obtained from Belfast to Larne. The distance between these two stations in Belfast is about two miles, and although there is the old Belfast Central Ry., which was constructed to give a connection between the two lines, it has only been used for freight purposes for years, and is, neither from its location or other conditions, likely to form part of a through express route. In 1892 elaborate plans were prepared by H. O. Lanyon, C.E., Belfast, for a central railway station, but as there is but little travel through Belfast, the three railways having their terminals in that city would not join in the cost of a work which would be little, if any, financial advantage to either of them. At Larne, some 14 miles from Belfast, and at Stranraer in Scotland, facilities for ferry steamers would have to be constructed at an estimated cost of £200,000, and three ferry steamers are considered necessary at a cost of £130,000 each. A fast steamship service is maintained by the railway companies between Larne and Stranraer, it having been found that these points are more convenient than Donaghadee in Ireland, and Port Patrick in Scotland, which are nearer, and between which the mail steamers plied about 1870. The total estimated cost of establishing the service as given by the promotors is £6,470,000, but there is one omission which they have made. It is that the gauge of the Irish railways is 5 ft. 3 in., while that of the English and Scottish railways is 4 ft. 8½ inches, so that the ferrying of freight and passenger trains entire will either have to be abandoned, or an extra expenditure incurred to lay a third rail between Larne and Enniskillen or Clones, so as to permit the English standard gauge rolling stock to be operated over existing Irish lines. The promoters evidently do do not regard as feasible the construction of a tunnel between Larne and Stranraer, for which plans have been made and a considerable sum expended upon surveys and trial borings.

In connection with this project a meeting was held at Ballina, Ireland, for the purpose of considering proposals to submit to the Imperial Parliament an application for the passing of an act entitled the Collooney, Ballina, Belmullet Ry. and Piers Act, authorizing the construction of 100 miles of railway in Sligo and Mayo, and the construction of a deep water pier at Blacksod Bay.

R. Bickerdike, M.P., Montreal, is the Canadian representative of the syndicate, and he is bringing the matter officially before the Dominion Government. Lord Strathcona has continually been impressing upon the Government the necessity for establishing a really fast line of steamers, and during his present visit to Canada has no doubt discussed the matter with the Government.

St. Lawrence and Chicago Steam Navigation Company.

The report presented at the annual meeting at Toronto Jan. 9 stated that the season of 1906 on the lakes was a fairly good one, but the falling off of the deliveries of grain at Fort William caused a decided drop in freights about the first week in Nov., and made the closing rates of freight very low. The directors have entered into a contract for the construction of a steamer which it is expected will be ready for the fall trade next season. It has been decided to issue $187,700 of new stock, and to offer the same to the present shareholders in the first instance at par.

ASSETS

Four steamers, Rosedale, Algonquin, Iroquois, W. D. Matthews	$560,000.00
New steamer (expended to date)	40,120.25
Due by underwriters	5,000.00
Balance in bank	74,176.35
	$679,296.60

LIABILITIES

Capital	$563,300.00
Balance of profit carried forward	115,996.60
	$679,296.60

PROFIT AND LOSS

Balance forward, Jan. 2, 1906		$80,057.27
Steamships' earnings	$117,400.81	
Due by underwriters	5,000.00	
Interest	2,649.30	
		125,050.11
		$205,107.38
Insurance	$19,941.00	
Cost of management, viz.: directors' and auditors' fees, salaries, taxes, office rent, etc.	12,839.78	
		$ 32,780.78
Dividend, 10%, payable Jan. 2, 1907		56,330.00
Balance carried forward		115,996.60
		$205,107.38

The old board was re-elected. The directors for the current year are: President, W. D. Matthews; Secretary, J. H. G. Hagarty; Superintendent, S. Crangle; other directors: C. S. Gzowski, E. B. Osler, G. F. Hagarty, Toronto; J. Carruthers, Montreal; G. R. Crowe, Winnipeg. A. A. Wright has been appointed Assistant Superintendent.

N. CURRY, President. N. A. RHODES, Vice-President. J. M. CURRY, Sec.-Treas.

CAPITAL, $1,000,000.

RHODES, CURRY & CO.

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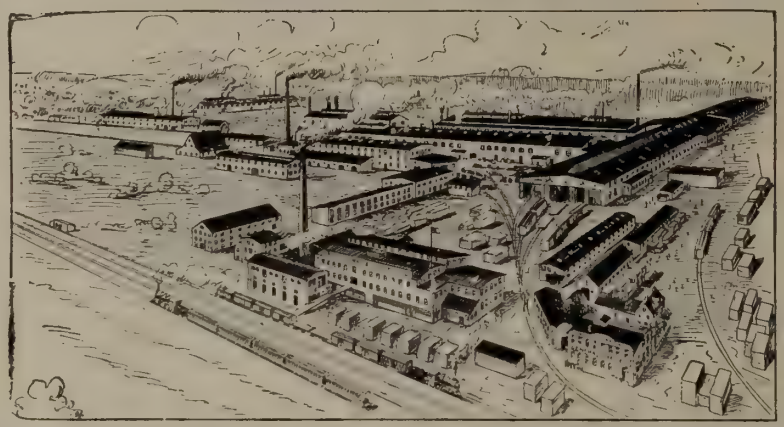

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300 Freight Cars 4 Passenger Cars 4 Snow Plows 3,000 Car Wheels
2,500 Car Axles 500 tons Castings 1,000 tons Forgings

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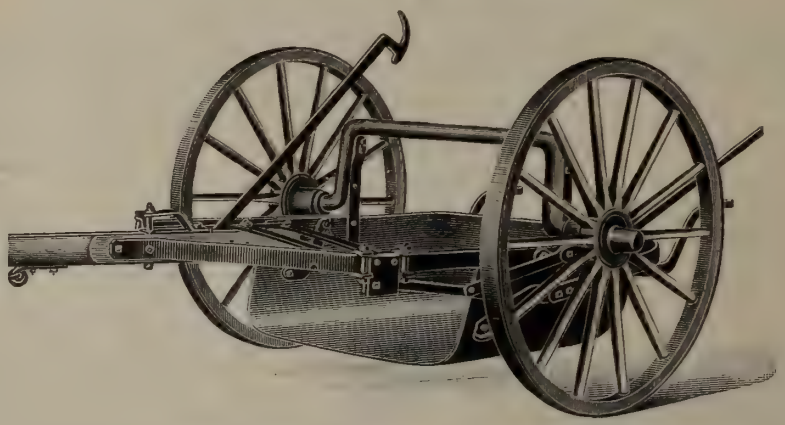

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REGINA, SASK. CALGARY, ALTA.
VICTORIA, B.C.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM DEC. 15, 1906, TO JAN. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Cayuga.....	122,219	Toronto, Ont., 1907.....	Screw 328 N.H.P.....	305.0	36.6	14.2	2196	1168	Toronto, Ont.....	Niagara Navigation Co., Toronto, Ont.
Forest Queen.	122,167	Vancouver, B.C., 1906....	" 6 "	50.5	11.7	6.0	35	24	Vancouver, B.C.....	N. A. McKinnon, Vancouver, B.C.
Ipsroh.....	122,164	" " 1902....	" 1 "	28.7	9.2	2.7	8	5	" "	G. M. Dusenbury, Vancouver, B.C.
J. E. Boyden.	122,161	Seattle, Wash., 1888.....	" 37 "	84.4	19.0	9.7	123	83	" "	S. F. Mackenzie, Vancouver, B.C.
Mowitz.....	122,166	Vancouver, B.C., 1906.....	" 1 "	45.9	17.1	5.2	50	34	" "	H. C. Nixon, Denman Island, B.C.
Rosemary....	122,122	Sable River, N.S., 1906....	" 8 "	66.1	14.6	5.9	41	28	Halifax, N.S.....	Mrs. R. Neville, Halifax, N.S.
Sagamo.....	122,218	Toronto, Ont., 1906.....	" 68 "	152.0	29.0	9.7	744	420	Toronto, Ont.....	Muskoka Lakes Nav. & Hotel Co., Toronto
Storm King...	122,165	N. Westminster, B.C., 1906	" 16 "	82.3	19.0	9.6	98	67	Vancouver, B.C.....	H. Symcock, New Westminster, B.C.
Venture.....	122,163	Vancouver, B.C., 1906.....	" 1 "	29.1	9.3	3.4	8	6	" "	J. C. Hodden, New Westminster, B.C.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM DEC. 15, 1906, TO JAN. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Addie & Beatrice	121,898	Shelburne, N.S., 1906.....	Schr.	113.0	29.0	11.0	230	197	Shelburne, N.S....	Z. Nickerson, Port Clyde, N.S
Gov. Warmingt'n	122,015	Vermillion, Ohio, 1872....	"	178.4	31.6	22.5	579	502	Ottawa, Ont.....	E., W. and F. Hall, Ottawa, Ont.
Helen Davis....	122,232	Clark's Harbor, N.S., 1906.	Sloop	33.6	11.4	6.0	12	12	Barrington, N.S...	L. Brannen, Clark's Harbor, N.S.
Minola.....	122,231	" " "	"	32.0	11.4	5.8	13	13	" "	J. E. Nickerson and T. Penny, C. Harbor, N.S.
More Light	122,121	Forclue, N.S., 1906.....	Schr.	66.5	18.8	7.8	52	52	Halifax, N.S.....	A. B. Hooper, Forclue, N.S.
Reliance.....	121,899	Shelburne, N.S., 1906.....	"	107.0	28.5	11.8	626	192	Shelburne, N.S....	G. A. Cox, Shelburne, N.S.
Topaz.....	122,162	Victoria, B.C., 1903.....	Barge	49.6	13.0	5.8	33	23	Vancouver, B.C....	B.C. General Contract Co., Vancouver, B.C.

Dominion Marine Association.

The annual meeting was held at Ottawa, Jan. 16, the President, J. A. Cuttle, of the Montreal Transportation Co., occupying the chair, the others present being S. C. Calvin, Calvin Co., Ltd.; J. and T. Donnelly, Donnelly Salvage and Wrecking Co.; W. Overton, Dominion Fish Co. and Northwest Navigation Co.; E. A. Hall, F. E. Hall & Co.; W. E. Bishop, Hamilton Steamboat Co.; E. E. Horsey, Lake Ontario and Bay of Quinte Steamboat Co.; C. A. Jaques, Montreal and Great Lakes S.S. Co., Montreal and Lake Erie S.S. Co.; D. J. McIntosh, Niagara, St. Catharines and Toronto Navigation Co.; J. Hannan, J. P. Kavanagh, C. E. Loomis, Ogdensburg Coal and Towing Co.; J. H. Hall, R. T. Holcomb, Ottawa Forwarding Co.; R. W. Shepherd, F. Elliot, Ottawa River Navigation Co.; D. Murphy, Ottawa Transportation Co.; W. E. Lawlor, W. Lawlor & Son; C. J. Smith, G. Johnston, Richelieu and Ontario Navigation Co.; D. Noonan, Rideau Lakes Navigation Co.; J. H. G. Hagarty, St. Lawrence and Chicago Steam Navigation Co.; G. Sommerville, Toronto and Montreal Steamboat Co.; G. B. Greene, Upper Ottawa Improvement Co.; F. King, Secretary-Treasurer of the Association; Acton Burrows, Managing Director, RAILWAY AND MARINE WORLD.

The report of the Executive Committee upon the work of the Association during the past year showed that a large number of matters had been given consideration, and that definite action had been taken in several of them, which had resulted in improved conditions.

LEGISLATION.—In connection with the passing of the Lord's Day Act it was impossible to procure the complete relief desired by the Association, and pressed upon the consideration of Parliament by deputation, memorial and by conference, but substantial recognition was given to the arguments as advanced, and the act will be obeyed with less difficulty than if it had been passed as introduced. Acting in conjunction with the Shipping Federation, a protest was made to a proposed amendment of the pilotage laws to make vessels trading between Montreal and Father Point liable to compulsory pilotage dues, and the bill was withdrawn. Subsequently the draft of a new bill was submitted amending the pilotage law in several particulars, and omitting the clause exempting vessels under 16 ft. draught trading between the Great Lakes and St. Lawrence ports, but conferring upon the Montreal Pilotage authorities the power to decide what vessels should be exempt. The executive filed an objection to the withdrawal of the statutory exemption now enjoyed, and if the bill is introduced at the present session of Parliament, it will require careful consideration by the Association. The bill brought forward by the Department of Marine requiring all barges, whether propelled by sail or not, to carry certificated masters, was objected to by the Association, and has been dropped for the present. Further correspondence took place upon the subject of extending the Port Warden's Act to apply at grain shipping ports on inland waters, and the committee's views expressed against the proposal were promised consideration. In connection with this matter a bill, no. 35, introduced at the present session of Parliament, providing for a loading on barges and an official inspection to secure seaworthiness and proper loading, should be considered. A further step in advance had been taken in connection with the efforts made to obtain for all Canadian vessels the exemption from the U.S. tonnage taxes to which they are entitled by the reciprocal exemption clauses of the U.S. statute, and the time being appropriate the abolition of the hospital tax on vessels in Quebec was urged. A bill passed the U.S. Senate, which would have rendered Ontario vessels liable to the tonnage tax, and destroyed the chance of relief from the hospital tax in Quebec, but representations were made by this Association, the Lake Carriers' Association, the Association of Passenger Steamboat Lines, and the Canadian Government, with the result that the bill was not reported to the House of Representatives, but stood over to the present session. The committee of Association of Passenger Steamboat Lines is taking active measures to oppose the bill, and it is not likely that it will be passed this session, at any rate so far as it affects the Great Lakes and St. Lawrence. Members of the Association are asked to urge upon their members of Parliament the importance of taking steps to have the hospital tax in Canada abolished. Further correspondence had taken place with respect to the U.S. head tax, and the responsibility of a steamboat under its implied contract to land a passenger to whom it has sold a ticket to a port in the U.S. The Canadian Court of Appeal had decided the point adversely to the carrier, and the latter must therefore protect himself in making his contract to carry. A bill to amend the Act respecting masters and mates providing that none but British subjects may hold certificates, has been introduced at the current session of Parliament, and has been referred to a special committee. The executive committee is of opinion that the bill should be opposed and will attend before the committee when the sittings are held. The bill to amend the Steamboat Inspection Act in regard to the employment of certificated engineers, which has been brought forward for several years past, has been again introduced in the House of Commons, and as before is being opposed by the Association.

AIDS TO NAVIGATION.—The committee on aids to navigation appointed at the last annual meeting compiled and adopted, from many recommendations, a complete list of aids and improvements required between the head of the lakes and Montreal, subdividing this list, and making the recommendations in due course by memorial to the Lighthouse Board, the Department of Public Works and the Department of Railways and Canals respectively. A special report of this committee gives a list of aids recommended with the decision of the departments as follows:—

Northport Shoal, Bay of Quinte.—Gas buoy to be placed on opening of navigation.

Presq' Ile Point.—Two inch diaphone under construction.

Brighton Harbor.—The matter of lighting at Salt Point is under consideration.

Trenton Harbor.—Tenders have been called for dredging at the dock, and some additional buoys will be placed during the coming season.

Belleville Harbor.—Additional dredging ordered.

Rideau Lakes and River.—Some dredging has been done between Kingston and Brewer's mill, and more will be done during the summer. No action has been taken upon the recommendation for additional lights at the locks between Smith's Falls and Merrickville.

Ottawa River.—Dredging has been done at many points; two additional range lights have been erected, and the electric lighting of the Carillon and Grenville canal undertaken. Improvements in the lighting between Montreal and Ottawa, generally, is asked for.

Long Point, west end of Wolfe Island.—Gas buoy, not approved.

Suez Channel, above Dickenson's Landing.—Channel will be buoyed in 1907.

Lake St. Louis.—Two gas buoys will be placed between Windmill Point on Ile Perrot and Lightship No. 3, during the coming season.

Brockville Narrows.—Gas buoy abreast of first island above Brockville to be placed next season.

Port Colborne Range Lights.—The lighting to be changed during the coming season.

Port Dalhousie.—Request for a fog horn approved.

Surprise Shoal, Georgian Bay, and other points in Lakes Huron and Superior.—Recommendations approved and a suggestion made that others be asked for.

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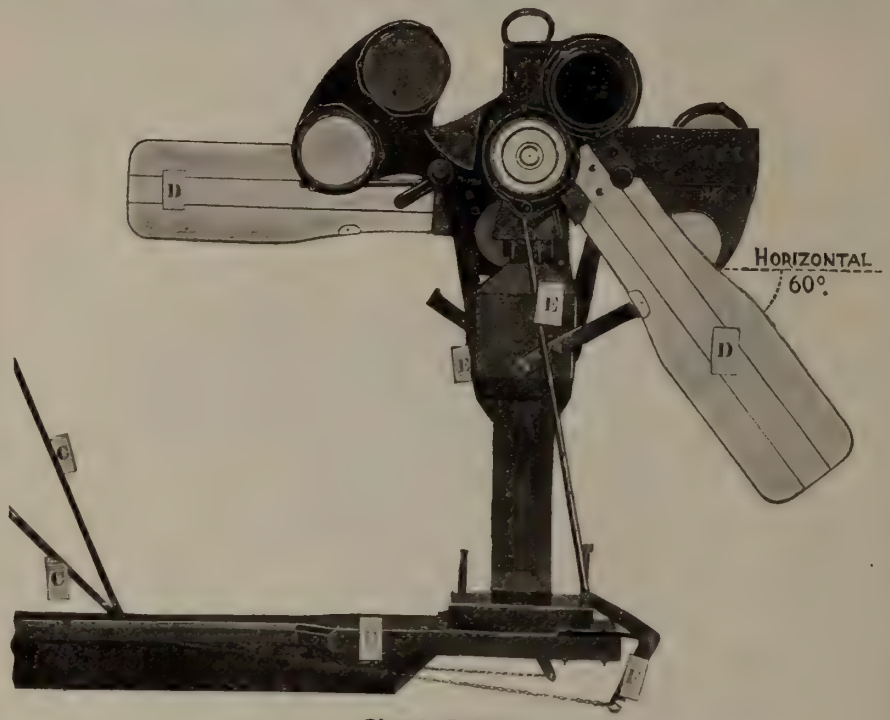

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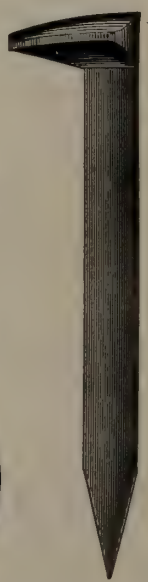

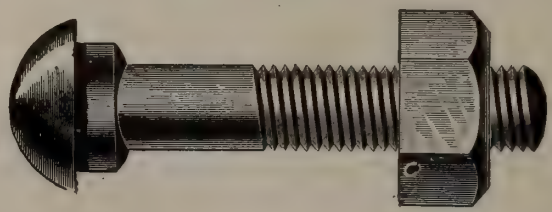

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88 BROAD STREET
BOSTON, MASS.

North Shore of Georgian Bay and Lake Huron.—Consideration should be given to a proposal to light and buoy this route.

Port Colborne Harbor.—The widening and deepening of the entrance is asked for.

Gun Shoal, Kingston Harbor.—Removal of shoal asked for.

Lake St. Francis.—Black spar buoy at Lancaster bar to be replaced by a gas buoy.

Belleville Bridge.—Better protection for channel through draw of bridge to be provided.

Goderich Harbor.—Electric light to be placed on breakwater at harbor entrance.

Shoals in St. Lawrence.—Shoals at Cardinal canal removed.

Toronto Harbor.—Proposals for the improvement of entrance to the harbor are under consideration.

With reference to recommendations made by a deputation of the Association at the time of the last annual meeting in Ottawa, it may be noted: That the order-in-council regarding electric traction on the Cornwall canal was modified to exempt mail and passenger boats, tugs, pleasure yachts, and government steamers from the requirement to use the electric traction; and that on the request for protecting dams and fenders at bridge piers on the Lachine canal the department undertook to add the desired protection in all cases where it had not already been furnished.

INTERNATIONAL WATERWAYS COMMISSION.—The various subjects discussed at the sessions of International Waterways Commission are commended to the serious consideration of the new executive committee.

COASTING LAWS.—Alleged breaches of the coasting laws in connection with the carriage of grain from Upper Lakes ports, have been brought to the notice of the Government. It might be noted in this connection that the department has decided that the carriage of a cargo of grain from Fort William to Port Huron, Mich., in a U.S. vessel, and thence into Canada by G.T.R. for Canadian consumption, is not a violation of the law.

BILLS OF LADING.—The committee is of opinion that it would be advisable for vessel owners to agree to insist upon the insertion in bills of lading of Sec. 3 of the Harter Act (U.S.), as follows: "That if the owner of any vessel transporting merchandise or property to or from any port in the U.S. shall exercise due diligence to make the said vessel in all respects seaworthy and properly manned, equipped and supplied, neither the vessel, her owner or owners, agent or charterers, shall become or be held responsible for damage or loss resulting from faults or errors in navigation or in the management of said vessel, nor shall the vessel, her owner or owners, charterers, agent or master be held liable for losses arising from dangers of the sea or other navigable waters, acts of God or public enemies, or the inherent defect, quality or vice of the thing carried, or from insufficiency of package or seizure under legal process, or loss resulting from any act or omission of the shipper or owner of the goods, his agent or representative, or from saving or attempting to save life or property at sea, or from any deviation in rendering such service." The Winnipeg Grain Exchange has refused to assent to the proposal to incorporate this clause in bills of lading.

GRAIN CLEARING HOUSE, ETC.—The secretary is keeping in touch with the proceedings in connection with the proposal to establish a grain clearing house for despatch in loading and unloading, and the adjustment of shortages, and the outcome of the action will be awaited with interest.

ROYAL COMMISSION ON GRAIN TRADE.—Statements showing in detail for each fleet engaged the delays experienced in unloading, the actual out-turns in question and various other particulars were prepared and presented to the Commission.

MISCELLANEOUS.—The Association renewed its request to the Government to take steps to secure an extension of the period of navigation on the Upper Lakes, so as to correspond with the natural opening and closing conditions on St. Mary's River; a formal protest against the withdrawal of water from Welland Canal for power development purposes has been filed. The committee recommends that the Government be asked to amend the Inland Seamen's Act so as to render it legal to carry a seaman without articles, and so as to impose the same penalties upon the seaman at least during the round trip to the port of engagement, as he is now subject to when lawfully engaged under the act. The grain section of the Association has continued to devote attention to matters of special interest in the business and in connection with the routes traversed.

P154

A. A. WRIGHT,
President Dominion Marine Association.

MEMBERSHIP AND EXPENSES.—The tonnage entered in the Association is 110,343 net registered tons, of which 76,570 is steam and 33,773 is barge and sailing property. The new vessels put in commission during the course of the season are not included in this, and with those recently launched, may be expected as additions to the list in 1907. The total tonnage shown, however, is lightly, increased above that of the precedings year and the treasurer's report shows a revenue just sufficient to meet expenses. The present rate of assessment should therefore be continued.

The report was considered clause by clause, and the following resolutions arising out of the report and its discussion were adopted:

RESOLVED not to oppose the proper imposition of a load-line on vessels, said to be proposed by bill 35, respecting the loading and inspection of barges.

RESOLVED to postpone the appointment arranged with the Premier and the Minister of Marine and Fisheries, regarding hospital taxes, etc., until the Shipping Federation of Canada, which had failed at the last moment to complete its arrangements to join with this Association, could be represented.

RESOLVED to make no further opposition to the present bill respecting masters and mates, introduced in the House of Commons by Mr. Lancaster.

RESOLVED to present to the Government protests similar to those already made to the International Waterways Commission against any withdrawal of water or any action upon the Great Lakes, whether in connection with the Chicago Drainage Canal or elsewhere, which might have the effect of lowering the levels in the Welland Canal or the St. Lawrence and its canals.

RESOLVED to petition for legislation in Canada similar to the Harter Act in the United States, so as to provide vessel-owners with similar protection against the negligence and perils enumerated.

RESOLVED to protest against the proposed further withdrawal of water for power purposes from the Welland or any other canal, and to urge the Government to assume responsibility for accidents arising in any way from such withdrawal of water. A committee, consisting of Messrs. Murphy, Donnelly, Smith and the Secretary was appointed to present the matter to the Department of Railways and Canals in the afternoon.

RESOLVED to ask for the legislation proposed in the report regarding the engagement of crews, but to make it clear that both the benefits and penalties proposed are to be enjoyed and borne by both parties, just as they would be where articles are signed.

The report of the Executive Committee, subject to any alterations made by the above resolutions, was adopted.

The Secretary-Treasurer's report gave the following figures: Balance from 1905, $1,307.31; interest, $32.04; membership fees, $1,700,35; total receipts, $3,039.70; disbursements, $1,688.99; balance on hand, $1,350.71. The rate of assessment for 1907 was fixed the same as for 1906.

The President spoke very highly of the valuable services performed by the Secretary-Treasurer in connection with legislation and other matters, and $200 was voted him as a bonus in addition to his regular salary, for special work done during the past year.

It was resolved to ask the Grand Trunk Pacific Ry. to amend its plans for a bridge over the Kaministikwia River at West Fort William, so as to provide a wider span than 80 ft., and also to communicate with the Premier, the Ministers of Public Works, Marine, and Railways and Canals, and with the Railway Commission, referring to the matter and asking due consideration in all such cases for the requirements of the largest modern vessels.

It was resolved that the Dominion Marine Association, in annual general meeting assembled, re-affirms its opinion that the immediate enlargement and improvement of the Welland Canal is urgently necessary, and that copies of this resolution be forwarded to the Premier, to the Minister of Railways and Canals, and to the Kingston Board of Trade.

It was resolved that the Government be asked not to reduce the capacity of the proposed Port Colborne grain elevator or elevators, but to proceed promptly with the work of erection and to provide at least the capacity originally intended as soon as possible.

The following Committee on Aids to Navigation was appointed: A. A. Wright, C. J. Smith, D. Noonan, R. W. Shepherd, L. L. Henderson, T. Donnelly, S. Crangle, H. H. Gildersleeve, G. T. Marks and the President.

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A suggestion from S. C. Calvin for telephone connection from the lights on the False Ducks, Lake Ontario, to the mainland, the necessity for which was proved by frequent recent occurrences, was referred to the committee last mentioned.

A vote of thanks was tendered the retiring President, J. A. Cuttle, who expressed his wish to surrender his place on the executive committee in favor of some other member.

The following officers were elected for the current year: President, A. A. Wright; First Vice-President, C. J. Smith; Second Vice-President, G. T. Marks; other members executive committee: T. Donnelly, H. H. Gildersleeve, J. H. Hall, L. Henderson, C. A. Jaques, J. P. Kavanagh, D. Murphy, J. Playfair, F. Plummer.

On adjourning the representatives attending the meeting repaired to the Laurentian Club, where, as last year, they were most hospitably entertained at luncheon by Dennis Murphy.

In the afternoon the deputation appointed waited upon the Deputy Minister of Railways and Canals, and presented the request regarding the withdrawal of water from canals, referring particularly to the application of the Hamilton Cataract Power, Light and Traction Co. for more water power from the Welland. The deputation received an emphatic assurance from Mr. Butler that they had nothing to fear in the matter, and that the Department would adhere to the principle that the canals must be absolutely protected for their primary purpose, viz., the safe transportation of vessels. The Department could not entertain the proposal that it should assume responsibility for accidents, as the question of negligence and fault must be determined on the facts of each case, but everything possible would be done to preserve and improve the safety of navigation. The appointment with the Premier and the Minister of Marine was postponed until the Shipping Federation could join in a deputation. Regarding the proposed amendment of the Inland Waters Seaman's Act, the Minister of Marine has already expressed his appreciation of the vessel-owners' difficulty, especially on short runs, and has asked the Secretary for a draft of such amendments as are proposed to meet the cases alluded to.

In connection with the discussion by a special committee of the House of Commons of the bill respecting certificates to masters and mates, it was stated Jan. 15, that of the 3,659 coasting, inland and ocean certificates issued in the Dominion since Jan. 1, 1906, there had been 154 issued to foreigners after they had been domiciled in Canada for three years. The bill was opposed by the members for Essex and West Lambton, who stated that over 100 men, whose families were domiciled in their constituencies, held certificates in the U.S., and if this bill were passed it would lead to reprisals. The Government will announce its policy on the bill at a future date.

J. B. Black, M.P., asked the House of Commons recently to assent to a resolution requesting the Government to take the necessary steps to secure the cancellation of the existing coasting privileges now enjoyed by foreign countries under Imperial treaties. The discussion brought out the fact that a big share of the coasting trade of the Maritime provinces, and between the Maritime provinces and Montreal, had got into the control of Norwegians and Swedes, who worked for less than Canadians, lived poorer and brought all their supplies from their own countries. The Premier stated that the matter was under the consideration of the Government, and the motion was withdrawn.

Marine Notes from Twin Ports.

Our Port Arthur, Ont., correspondent writes: "The total grain shipments out of Port Arthur and Fort William for the whole season of navigation of 1906, April 17 to the close Dec. 12, were as follows:

Wheat carried in Canadian vessels	31,978,334.50	bush.
Oats carried in Canadian vessels.	5,741,564.28	"
Barley carried in Canadian vessels	683,759.44	"
Flax carried in Canadian vessels	284,923.45	"
Wheat carried in Foreign vessels.	12,398,003.40	"
Flax carried in Foreign vessels..	97,130.51	"
Total	51,183,718.	"

"The destinations were as follows:

	Wheat bush.	Oats bush.	Barley bush.	Flax bush.
Owen Sound	1,817,688	2,465,586	76,850	49,108
Midland	3,527,309	115,195	.....	.....
D. Harbor	5,246,248	793,991	17,578	.....
Collingwood	690,618	.....	30,737	.....
Pt. Edward	2,665,382	81,268	105,477	158,117
Meaford	1,468,084	.....	.....	.....
Goderich	1,431,823	.....	.....	.....
Thorold	730,678	.....	.....	.....
Pt. Stanley	125,200	.....	.....	.....
Montreal, Kingston, Prescott	10,221,396	2,285,522	453,115	77,697
Pt. Huron	1,473,108	.....	.....	.....
Buffalo	13,535,739	.....	.....	.....
Erie	1,371,754	.....	.....	.....
Chicago	71,307	.....	.....	.....

"The wheat shipments showed an increase over 1905 of 3,350,493 bush., other grain an increase of 5,301,776 bush. Wheat shipped to Canadian ports showed an increase of 640,087 bush., and other grain an increase of 5,516,457 bush. Wheat shipped to foreign ports showed an increase of 1,710,406 bush., other grain shipped to foreign ports showed a decrease of 117,550 bush. The total wheat shipments were not up to expectations; the very small export demand during Nov. and Dec. resulted in a great falling off in the movement. There will consequently be a large amount of the present year's crop to come forward during 1907. The weather during the last three weeks of navigation was unusually stormy and resulted in a number of bad disasters, the steamers Theano, Monarch and Golspie becoming total losses on Lake Superior, fortunately with little loss of life, but entailing great sufferings on the crews, several of the crew of the Golspie being still in hospital at Sault Ste. Marie. This latter wreck is to be investigated by the Government, and it is to be hoped that the blame, if blame there be, will be brought home to the rightful shoulders, as from present appearances, and the stories told by the crew, it would appear to have been the most inhuman act in the whole annals of the lakes."

Atlantic and Pacific Ocean Marine.

The Furness Line S.S. Evangeline, from London, Eng., for Halifax, N.S., put into Queenstown, Ireland, Jan. 7, disabled.

Dr. C. Neville, who died at Sutton, Surrey, Eng., recently, was for a number of years medical officer on the Allan Line S.S. Parisian.

The C.P.R. has purchased the Liverpool tug Cruizer, to act as a tender to the company's steamers at St. John, N.B., and Quebec.

The Elder-Dempster Co.'s steamship line between Canadian and Mexican ports is attracting an increasing amount of freight, according to a statement made by D. W. Campbell, Montreal, the manager.

The S.S. Briardene, which was towed into Halifax, N.S., disabled, Dec. 7, has been repaired, coming out of dock Jan. 7. She then proceeded to Liscombe, N.S., to complete loading for Bordeaux, France.

C.P.R. officials state the management does not contemplate removing the English end of its steamship business from Liverpool at present, neither does it contemplate putting on steamers to run into Manchester, Eng.

Jas Piper, for many years in the service of the Allan Line Steamships at Quebec, died in hospital there, Jan. 5, aged 75. Mrs. J. B. Lambkin, wife of the Assistant General Passenger Agent, Intercolonial Ry., Halifax, N.S., is a daughter.

The C.P.R. S.S. Empress of Ireland touched bottom in the Mersey, Jan. 4, and got off without injury early in the following morning. The company's officials say that the passengers were not aware of the fact that the steamer was ashore.

A bottle was found on the beach at Castlerock, Derry County, Ireland, Jan. 1, containing a message signed by several members of the crew of the Allan Line S.S. Huronian. This steamer sailed from Glasgow for St. John, N.B., Feb. 11, 1902, and has never been heard of since.

An investigation held at Liverpool, Eng., resulted in a finding that the Thomson Line S.S. Nemea, abandoned on fire, at sea, Oct. 16, on the voyage from St. John, N.B., to Manchester, Eng., carried an excessive deck load of lumber. The officers were found not to be to blame in any way.

Robert Reford & Co. (Ltd.), Montreal, agents for the Donaldson, Thomson and Lord lines of steamers trading from various English, Scotch and Irish ports to Canada, have arranged to open an office in Quebec for freight and passenger business, May 1. S. Barrow, of Quebec, will be the local representative.

The C.P.R. S.S. Lake Michigan was seized at Halifax, N.S., for a breach of the customs regulations, Jan. 4, but was released on putting up a deposit of $400 to cover any fine. The offence is said to be the breaking of a seal and the removal of stores between St. John, N.B., and Halifax, the steamer being then trading coastwise.

Capt. Worsnop left Ottawa, Jan. 14, for Vancouver, B.C., to complete arrangements for the starting of the Pacific ocean steamship service to Mexico. The first steamer, the Georgia, has left England, and will make her first trip in March between Mexico and Victoria and Vancouver, and the second steamer, the Lonsdale, follows.

The marine casualties for the season of 1906 on the Atlantic seaboard, the Gulf and River St. Lawrence, show a total of 30, against 21 in 1905; 17 vessels, representing a tonnage of 18,649, were abandoned as total wrecks. There were 13 casualties on the River St. Lawrence and Gulf, of which two, the ship Dybraag and the barque Magda, were total losses.

A recent issue of the Marine Engineer, published in London, Eng., stated that the C.P.R. was having two steamships for its Pacific Ocean trade built at Philadelphia. The report is evidently an error, as although two steamships are under construction at Philadelphia for the Pacific coast, they are for the Puget Sound Steamship Co., and not for the C.P.R.

The capital of the Bucknall Steamship Lines, Limited, has been reduced by the British Chancery Court by £765,000. The loss was occasioned by the shrinkage in value of vessels, and the decreased business. The company was largely engaged in trading to South Africa. It is now operating two of its steamers—the Bucentaur and the Pondo—between Vancouver and New Zealand.

The White Star Line has arranged to run a bi-weekly service of steamers between New York and Great Britain, the Saturday sailings being to Liverpool, and the Wednesday sailing to Southampton, calling at

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Temiskaming and Northern Ontario Ry. Commission.

SEALED tenders addressed to the undersigned at 25 Toronto street, Toronto, and endorsed, "Tender for Grading, Ballasting, etc.," will be received up to five o'clock p.m. of Wednesday, the thirteenth day of February, 1907, for the construction of an extension of the Temiskaming and Northern Ontario Railway, including clearing of right-of-way, bridging, grading, ballasting and tracklaying, complete and ready for operation, in accordance with plans and specifications prepared by the Chief Engineer of the Commission, such extension being from a point on the T. & N.O. Railway, 100 miles north of New Liskeard, northerly or north-westerly direction, to a point forming a junction with the Grand Trunk Pacific (Transcontinental) Railway, a distance of forty (40) miles, more or less.

Plans and specifications of the work may be seen at the office of the Chief Engineer of the Commission at North Bay

The rails, fastenings and ties will be delivered to the contractor at the southerly end of the work (say 100 miles north of New Liskeard).

Tenders will not be considered unless made on the form supplied by the Commission and signed with the actual signatures of the parties tendering. An accepted cheque on a chartered bank for $10,000.00, payable to the order of the Chairman and Secretary-Treasurer of the Commission, must accompany each tender

The cheque of the party whose tender is accepted will be forfeited if such party fails or declines to enter into a contract in form satisfactory to the Commission, or fails or declines to furnish security to the satisfaction of the Commission for the due completion of the work at the rates and on the terms stated in the offer submitted.

The cheques of parties whose tenders are not accepted will be returned to them on the contract being awarded. The Commission is not bound to accept the lowest or any tender. Dated at Toronto this seventh day of January, 1907.

H. W. PEARSON, Secretary-Treasurer.

Papers inserting this advertisement without authority will not be paid for same.

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VIA C.P.RY., AND NEWPORT, VT.

Lv. Montreal	*9.00 a.m.,	*7.45 p.m.
Arr. Lowell	*7.29 p.m.,	*6.37 a.m.
" Worcester	†9.04 "	*9.13 "
" Boston	*8.15 "	*7.30 "

VIA G.T.RY., AND WHITE RIVER JCT.

Lv. Montreal	*9.01 a.m.,	*8.40 p.m.
Arr. Lowell	*6.11 p.m.,	*7.17 a.m.
" Worcester	†9.04 "	*9.13 "
" Boston	*6.55 "	*8.05 "

VIA G.T.RY., WEST SHORE & ROTTERDAM

Lv. Toronto		*12.01 p.m.
" Niagara Falls		*3.31 "
" Buffalo	*4.30 a.m.,	*7.20 "
Arr. North Adams	*1.08 p.m.	*5.11 a.m.
" Worcester	*4.55 "	*9.59 "
" Boston	*5.20 "	*9 50 "

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Through the Heart of the White Mountains and famous Crawford Notch, via C.P.Ry.

Lv. Montreal	†9.00 a.m.
Arr. Portland	†8.00 p.m.
" Old Orchard	† p.m.

*Daily. †Except Sunday.

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ARMAND LALONDE, Can. P. & F.A., Montreal, P.Q.

Plymouth and Cherbourg. This alteration has been made in order to secure a share of the heavy continental tourist traffic of which the French and German lines now have the monopoly.

A. Harriman, an English iron moulder, is suing the Allan Steamship Co. for $8,912.75 damages. He was a steerage passenger on the Carthagenian, and claims that he has been permanently injured by not being provided with proper accommodation; that the water entered the cabin which he occupied with 12 other passengers (contrary to the provisions of the act) and reached his berth, in consequence of which he contracted inflammatory rheumatism and has been unable to follow his regular employment in consequence.

J. Thom, Manager of the Dominion Line in Montreal, states that he has been informed from the head offices of the company in Liverpool, that two new steamships had been ordered for the St. Lawrence route to meet the demands for high-class and speedy vessels. The new steamships will be about 12,000 tons capacity, and will have a speed of 17 or 18 knots an hour. They will be built by Harland & Wolff, Belfast, Ireland, which has an arrangement to build all vessels for the lines owned by the International Mercantile Marine Co.

A. Piers, Manager C.P.R. Steamships, sailed for Great Britain, Jan. 15, and expects to be absent for some time. He stated in Montreal, Jan. 9, that one of the purposes of his visit was to arrange for the enlargement of the company's fleet. The plans for this were not sufficiently far advanced for an official statement to be made. Press reports state that the Empress of Britain and Empress of Ireland are to be transferred to the Pacific Ocean, and are to be replaced on the Atlantic by somewhat larger and faster steamers; and another report says that the company is desirous of acquiring the Donaldson Line, trading between Canadian ports and Glasgow, Scotland.

Maritime Provinces and Newfoundland.

The iron ship Eskasoni, formerly owned at Sydney, N.S., and sailed by Sydney masters, has been sold to be broken up at Hong Kong.

C. Gunn has been appointed wharfinger of the Government wharf at Hampton, N.B., and L. D. Curry, to a similar position at Harbourville, N.S.

The St. John, N.B., river tug Sea King, owned by Batley Bros., was badly damaged by fire, Jan. 8, while lying at her winter berth, Indiantown.

The str. Amelia, which was put on the Nova Scotia eastern shore run to replace the burned str. Strathcona, went ashore near Guysboro, N.S., Jan. 14.

Commander E. B. Tinling, R.N., at one time a resident of Winnipeg, and latterly examiner of masters and mates at Halifax, N.S., died there Dec. 23.

C. Smith has been appointed wharfinger at Port Hood, N.S.; D. Livingstone, wharfinger at Whycocomagh, N.S., and Capt. Jas. Ryan, harbormaster at Liverpool, N.S.

The Three Rivers Steamship Co., of Prince Edward Island, is having a steamer built at Shelburne, N.S. The hull will be towed to Yarmouth, N.S., where the engines will be fitted.

The Reid-Newfoundland Co.'s str. Glencoe struck on an island just outside Port aux Basques, Nfld., sustaining some injuries, which necessitated her going to St. John's Nfld., for repairs recently.

The Newfoundland whaling steamers are being dispersed. The St. Lawrence is about due at Victoria, B.C.; the Fin and Avalon have been sold to go to Japan; and the Neptune has been sold to a Norwegian firm.

The company organized to take over the Eastern Steamship Co. and other companies controlled by C. W. Morse has been registered at Portland, Me., as the Consolidated Steamship Lines Co., with a capital of $60,000,000.

Two steel hopper barges are being built for the Dominion Government by I. Matheson & Co., New Glasgow, N.S. Their dimensions are: length over all, 105 ft.; breadth, 22 ft.; depth, 8 ft.; capacity, 200 cubic yards.

The Department of Marine has decided that the evidence adduced fully proves the charges laid against Capt. Pratt of the cruiser Curlew. Action will be taken on this finding either by calling upon Capt. Pratt for his resignation, or by dismissing him from the service.

The Swedish str. Garibaldi, coal laden from Port Morien, N.S., for Wabana, Nfld., went ashore at St. Pierre, Miquelon, Dec. 23. She was floated by the Sydney wrecking tug, Douglas H. Thomas, and reached Halifax, Jan. 5, under her own steam, for repairs.

During a heavy storm which raged on the Newfoundland coast Dec. 25, a number of vessels were considerably damaged. The fishing vessels, for the most part, remained in port. The schooner Mendora was driven ashore near St. John's, and was afterwards burned.

The Belle Isle Steamship Co. has purchased the str. Mary, now lying at Quebec, from the White Friars Steamship Co., and will take her to St. John's, Nfld., at the opening of navigation. The Mary will carry freight and passengers between St. John's, Wabana and Conception Bay points.

The Cape Breton Steamship Co.'s str. Beatrice, which was bought in Ireland in 1906, to replace the Baines Hawkins, lost off Scattarie, Mar. 10, ran on Cranberry Head, Sydney, Dec. 24, and was badly damaged. A survey made Dec. 30, showed that she may be successfully floated.

There is under construction at Yarmouth, N.S., a wooden freight steamer for T. F. Smith & Co., Halifax, N.S., having a length of 60 ft., and of 25 tons gross register. She will be fitted with steeple compound, surface condensing engine, driving a single screw, steam being supplied by a vertical boiler.

C. W. Spencer, General Manager Mackenzie, Mann & Co.'s Railways System, Eastern Lines, was in St. John, N.B., Jan. 7, in connection with a project for the establishment of a steamship service between Victoria Beach, N.S., the terminus of a branch of the Halifax and South-Western Ry., and Digby and St. John, N.B.

The coasting str. Strathcona, trading along the east coast of Nova Scotia, was destroyed by fire at Port Dufferin, Dec. 22. She left Halifax on her regular trip for Guysboro and intermediate points at noon, and eight hours later fire was discovered under the saloon. The flames spread quickly, and to prevent disaster, 40 boxes of dynamite, which were among the cargo, were thrown overboard The steamer was beached at Sunley's Point, Port Dufferin, and the passengers and crew succeeded in escaping. The steamer was valued at $70,000 and was insured for $35,000. The burned-out hull has been towed to Halifax.

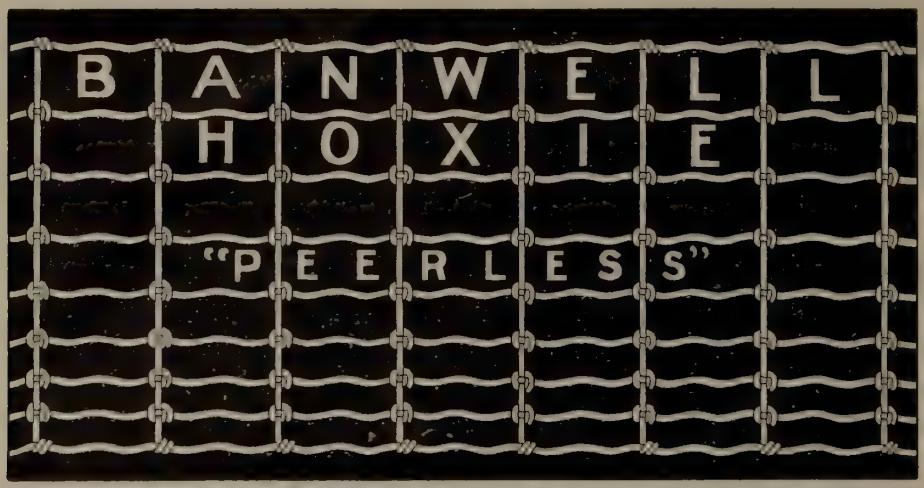
The Supreme Court at Ottawa has reserved judgment in the appeal of the Cumberland Ry. and Coal Co. against the decision of the New Brunswick courts giving judgment for $8,192 against the St. John Pilotage Commissioners. The action was originally brought to recover $15,680 paid by the C. Ry. and C. Co. as compulsory pilotage dues on its barges. The Quebec courts held that barges did not come under the compulsory pilotage regulations, and the company sought to recover the money it had paid. The difference between the amount of the judgment and the amount claimed was barred by the statute of limitations.

Lieut.-Col. Gourdeau, Deputy Minister of Marine; Lieut.-Col. Anderson, Chief Engineer of the Department of Marine, and Commander Spain, formally took over the Halifax dockyard from the Imperial Government Jan. 1. The Dominion cruiser Canada entered the dockyard, and her officers and crew landed at noon, when the Canadian ensign was formally hoisted. Capt. Knowlton is at present in charge for the Government. The property will be used by the Marine Department as a headquarters for all its maritime province vessels, as a depot for lighthouse stores, etc. The Imperial Government may use the dock when necessity arises for the repair of its men-of-war, and has the right to take it over again should Imperial policy render such a step necessary.

The St. John, N.B., City Council is considering a report from the committee appointed to consider a proposal for the nationalization of the port. The report stated that over $1,500,000 has been expended on wharves and terminals, and the exports have increased from nothing to more than $23,000,000. The tonnage amounts to half of that of Montreal, and is the result of only ten years' development. The total revenue from the whole of the harbor properties, including fisheries, for 1905, was $54,508.06, and for last year, $76,332.64, an increase of $21,824.58. Approximately the bonded debt for all the harbor properties is $1,042,090, and of this amount bonds to the extent of $172,990 have been redeemed, leaving $869,100 outstanding, on which the citizens are taxed $44,266.15. St. John was carrying this burden for the benefit of the whole Dominion. Based on the present cost of construction all the wharf properties would reach a valuation of over $3,000,000. The suggestion is that a proposition be made to transfer the properties and the sites on which they stand on St. John receiving a sum equal to the bonds that have already been redeemed, and also make an annual payment to provide for interest and sinking fund on outstanding bonds, the Carleton flats and Courtenay Bay flats to be given over free to enable the Government to extend facilities as trade demands. The ferries and landing would remain in control of the city.

Reports as to the injuries received by the British man-of-war Dominion, when she went ashore in Chaleur Bay, Que., in 1906, are rather contradictory. One report says that the injuries are so serious that the vessel is being sheathed with teak in order to prepare her for the voyage to Chatham dockyard; while Capt. Kingsmill, the commander, says the injuries, while extensive, are not so serious as the newspaper reports indicate.

The New York and Continental Line is being organized in New Jersey, to do business between New York, Hamburg, Rotterdam and other ports in northern continental Europe. The only interest the company has for Canadians is that the promoter is Wm. Peterson, of Newcastle-on-Tyne, England, who introduced the turret type of vessels into Canada, and made unsuccessful attempts to establish steamship lines between Great Britain and continental ports and Canada. The first steamer of the new service will be the Tropic, sailing about Feb. 2, from New York, and the second will be the Lord Erne, a 6,000 ton freight steamer, owned by the Lord Line, of Belfast. T. R. McCarthy has been appointed Montreal agent for the new line.



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TERMS OF PAYMENT.

An actual settler may purchase not more than 640 acres, on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal with interest in nine equal instalments annually thereafter as shewn in the following table:—

160	Acres at	$4.00	per acre,	cash payment	$95.85,	first year's interest	$32.64	and nine instalments of	$80.00
"	"	4.50	"	"	107.85,	" " "	36.73	" "	90.00
"	"	5.00	"	"	119.85,	" " "	40.81	" "	100.00
"	"	5.50	"	"	131.80,	" " "	44.89	" "	110.00
"	"	6.00	"	"	143.80,	" " "	48.98	" "	120.00
"	"	6.50	"	"	155.80,	" " "	53.05	" "	130.00
"	"	7.00	"	"	167.80,	" " "	57.16	" "	140.00
"	"	7.50	"	"	179.75,	" " "	61.22	" "	150.00
"	"	8.00	"	"	186.75,	" " "	65.28	" "	160.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of 6 per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

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This Company has 650,000 acres of selected lands in Manitoba and Assiniboia which offer excellent opportunities to settlers and investors who desire to secure good lands in well-settled districts. These lands are on sale at the Company's Office at Winnipeg, and at the various land agencies of the Canadian Pacific Railway Company.

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Through Pullmans on night and day trains without change from Montreal to New York City.
Tickets via D. & H. will be honored on Lake Champlain steamers without extra charge.
Summer Schedules in effect June 24th, 1906.

Abel I. Culver, 2nd Vice-President. **J. W. Burdick,** Pass. Traffic Man.

A. A. Heard,
Gen. Passenger Agent, - - ALBANY, N.Y.

Ontario and the Great Lakes.

The str. Bothnia, tied up at Kingston, Ont., was slightly damaged by a fire which broke out on board Jan. 10.

W. Gordon, Secretary of the Lighthouse Board, Department of Marine and Fisheries, died at Ottawa, Jan. 3, aged 35.

Capt. Jos. Powell, of Amherstburg, Ont., master of the str. Grammar, died at Buffalo, N.Y., from typhoid fever, Jan. 4.

Judge Hodgins presided at a sitting of the Admiralty Court at Sarnia, Ont., Dec. 27, when several small cases were disposed of.

The Hamilton and Fort William Navigation Co. has decided to place an order for an 8,500 ton steamer, to be built at Lake Erie.

The Northern Navigation Co. of Ontario declared a dividend at the rate of 6% per annum and a bonus of 1½% on the capital stock, payable Jan. 19.

The Upper Ottawa Improvement Co. is having two alligator scows built at Toronto, their dimensions being: length, 66 ft.; breadth, 14 ft.; depth, 6 ft.

The tug James Whalen towed the str. Woods into Fort William, Ont., Dec. 25, the first time on record on which a vessel has arrived in that port on so late a day.

The underwriters are advertising the Hamilton str. Winona for sale, as she now lies afloat in Collingwood, Ont., harbor. She was described in our Dec. issue, pg. 763.

The steel freight str. Tadousac, built at Toronto 1903, and of 2,359 tons register, has been sold by Waldie & Wright, Toronto, to the Northern Navigation Co. of Ontario.

The U.S. gunboat Sandoval, which it is proposed to station at Detroit, Mich., for the use of the naval militia, is being repaired at New York, before coming to the Upper Lakes.

C. Murphy, Ottawa, Ont., has been commissioned by the Dominion Government to make an enquiry and to report upon the administration of affairs at the Sault Ste. Marie, Ont., canal.

The vessels lying up for the winter at Fort William include six large steamers, 26 tugs and small steamers, three tow barges, and four dredges, the largest number of vessels that ever wintered there.

A body, on which was a lifebuoy belonging to the str. J. H. Jones, has been discovered by Indians on the east side of Christian Island, Lake Huron. The Jones was lost in a storm at the end of Nov.

A steam yacht, 108 ft. keel, 16½ ft. beam, and having a draught of 8 ft., is being built at Forester's Island, Ont., for Oronhyatekha, Supreme Chief Ranger, I.O.F. She is expected to be ready in June.

H. Hacker, for over 50 years a resident of Port Hope, Ont., died there Dec. 18, aged 86. He learned shipbuilding at Charlottetown, P.E.I., and subsequently lived at Chicago, Ill., and Rochester, N.Y.

Haney & Miller's tug Skylark left Port Colborne, Ont., for Port Stanley, Ont., Jan. 3, and went ashore in a dense fog off Port Maitland, Ont., Jan. 4. The tug went to pieces during the heavy gale of the night.

W. G. Walton, son of W. G. Walton, Hamilton, Ont., Vice-President of the company owning the str. Glenellah, fell into the hold of the steamer at Collingwood, Ont., Jan. 1, and died from concussion of the brain the same day.

The Hamilton and Fort William Navigation Co., Ltd., one of the companies controlled by R. O. & A. B. Mackay, Hamilton, Ont., has decided to build an 8,000 ton steamship for the upper lakes trade. She will be built on the Niagara River.

Capt. J. Sentimore, of the Huntsville, Lake of Bays and Lake Simcoe Navigation Co.'s str. Florence Maine, was presented with an address and a purse of gold, Dec. 25, in recognition of his rescuing Miss Slocum, a visitor at Port Cunnington, from drowning during the summer.

The hull of the new steamer to run the St. Lawrence River rapids, which the Richelieu and Ontario Navigation Co. is having built at Toronto, was launched Jan. 9, and named Rapids King by Mrs. Caverhill, of Montreal, wife of the chairman of the Executive Committee of the R. and O.N. Co.

The Superintendent of the Welland Canal reports that for the season of 1906, there were lightered at Port Colborne elevator, 1,009,473 bush. of wheat, 116,622 bush. of corn, 2,102 bush. of barley, 13,659 bush. of flax, and 29,111 bush. of oats, and that 383,437 bush. of wheat were taken to Thorold mills.

Two actions have been instituted in the Quebec courts against the Ottawa River Navigation Co., arising out of the collision between the steamers Maude and Ottawan, the plaintiffs being the widows of the engineer and a passenger, respectively, of the Maude. The damages claimed in each case is $10,000.

The Northern Navigation Co. of Ontario has presented a diamond ring to Jas. Whalen, managing owner of the tug James Whalen, which went to the rescue of the passengers of the N.N. Co.'s str. Monarch, recently wrecked on Isle Royale, Lake Superior. The Monarch, a Sarnia paper states, was the last vessel built at that port.

Capt. D. Milloy, at one time captain and owner of the str. Chicora, when she first came to the Great Lakes after her short period of blockade running in the Southern States, subsequently Manager of the Niagara Navigation Co., and until about five years ago lessee of Milloy's wharf, Toronto, died at his stock farm, Paris, Ont., Jan. 12, aged 70.

During the season of navigation of 1906, the number of vessels entering the port of Toronto was 3,406, against 3,332 in 1905; the aggregate tonnage being 1,524,827, an increase of 118,968 tons over the tonnage entered in 1905. The western gap had been dredged to give 16 feet of water, and the depth of water at the eastern gap had been increased to 16½ ft.

By an order-in-council the limits of the port of Amherstburg, Ont., are defined as being: All the waters of the Detroit River and of Lake Erie, on the Canadian side of the International boundary line, south of the parallel of 40° 10′ north latitude and west of the meridian of 83° 5′ west longitude. It is also declared that the act relating to harbor masters shall apply to the harbor.

The Farrar Transportation Co., Ltd., declared a dividend of 10% for the year 1906, at its annual meeting at Collingwood, Ont., Jan. 8. Following are the officers and directors for the current year: President, C. A. Farrar, Meaford, Ont.; Vice-President, F. Scott; Manager, G. P. Pearsall; Secretary, G. E. Fair; Treasurer, W. R. Rowland; other directors: J. G. Ferris, W. McCallum, W. J. Smith, H. Baird, D. D. Lewis.

The Collingwood Shipping Co. has been incorporated under the Ontario Companies' Acts, with a capital of $90,000 and offices at Collingwood, Ont., to buy, sell, own and operate steamships, tugs, elevators, warehouses, tramways, wharves, docks, and coal docks for freight and passenger business, and to buy, sell, own and operate a wrecking plant. The provisional directors are: W. T. Allan, M. Brophy, J. R. Arthur, W. A. Hogg, W. Carmichael, of Collingwood.

At the adjourned annual meeting of the Hamilton Steamboat Co. in Toronto Jan. 10, the old directors were re-elected for the current year except M. Leggatt, President, whose place on the board was taken by W.

THE STEAMSHIP WINONA.

This vessel, which was owned by the Winona Steamship Company, Limited, Hamilton, Ont., was fully described in our Dec. issue, pg. 763. She ran ashore on one of the Duck Islands, Lake Huron, Nov. 17, but was subsequently floated and taken to a Georgian Bay port for repairs, the owners subsequently abandoning her to the underwriters.

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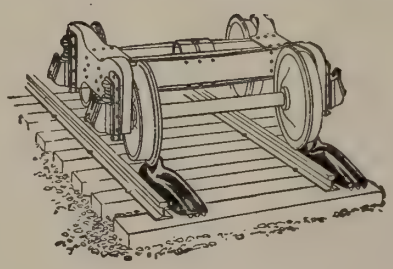

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E. Bishop, manager. The directors and officers now are: President, Æmilius Jarvis; Vice-President, H. G. Nicholls; Treasurer, C. E. A. Goldman; other directors: A. Bruce, K.C.; W. E. Bishop, H. B. Whitton, A. Angstrom. With the exception of Mr. Whitton, of Hamilton, they are all Torontonians.

The Nautical Gazette, New York, Dec. 27, 1906, contained the following item: "It is a singular coincidence that all of the British-built boats operating on the Great Lakes this year were lost in a single week." In a previous issue it contained an article on the losses on the great lakes during the season, giving the following figures: Vessels, total losses, 47; strandings 132, collisions 32. Out of the 47 vessels named by the Nautical Gazette as being total losses we fail to recognize any British-built steamer at all. The new British-built steamer Winona had two accidents and is now being offered for sale by the underwriters, and there were several accidents to British-built steamers at different points on the Great Lakes, but no total losses.

Capt. T. Donnelly, of Kingston, was directed by the Department of Marine, to take evidence and report as to the loss of the Golspie, one of the steamers managed by R. O. and A. B. Mackay, Hamilton, Ont., near Michipicoten, Lake Superior, Dec. 4, and the subsequent treatment of the crew. Evidence was taken at Owen Sound and Collingwood, Ont., and a report made to the Department. A subscription in aid of the wrecked seamen has been made, several thousand dollars having been received. An action for libel has been instituted by the managers of the steamer against the Toronto Globe. The representative of the underwriters who visited the wreck says the steamer is resting easy, and can be floated.

The Turbine Steamship Co. is reported to have lost between $17,000 and $18,000 as the result of its operations during 1906. The trip south to the West Indies resulted in a heavy loss, and a lot of repair work was necessary, as a result. It has been decided to make two trips a day between Hamilton and Toronto during the season of 1907, and to make a weekly trip on Saturday night to Charlotte, N.Y., returning on Monday morning. Capt. Crawford has been appointed master, succeeding Capt. Bongard. Following were the directors elected at the annual meeting held at Hamilton, Ont., Jan. 14: J. C. Eaton, J. J. Vaughan, H. McGee, J. Hyslop, Toronto; J. Moodie, W. Marshall, W. C. Hawkins, Hamilton. The meeting of directors for the election of officers will be held in Toronto.

B.C. and Pacific Coast Marine.

The Alaska Steamship Association has been broken up, on account of the proposed investigation by the U.S. Government.

The str. Indianapolis is about to be withdrawn from the Victoria-Seattle run, and will be run between Seattle and Tacoma, Wash.

The B. F. Graham Lumber Co. is arranging to purchase a 600 ton steamer for its lumber trade at San Juan and Esquimalt, B.C.

The Victoria, B.C., Board of Trade has passed resolutions in favor of making Victoria a free port, and doing away with compulsory pilotage.

The C.P.R. has been given a contract by the Dominion Government for carrying the mail by steamer between Victoria, B.C., and Seattle, Wash.

The repairs to the C.P.R. str. Princess Victoria, necessitated by her stranding on Lewis rock near Victoria, B.C., in Oct., 1906, have been completed.

Capt. Reid, of the C.P.R. str. Beaver, is reported to have been suspended for six months from Jan. 1. Capt. Gardner has taken charge of the steamer.

The name of the steam tug Sarah M. Renton, official number 121,761, registered at Vancouver, B.C., has been changed by order-in-council to that of Erin.

The str. Themis, chartered by MacKenzie Bros., Vancouver, B.C., ran on Cardigan reef, Queen Charlotte Sound, recently, and has become a total loss. The crew were landed in Vancouver by a passing fishing steamer Dec. 16.

A contract has been let by the Puget Sound Excursion Co. for the complete overhaul of the str. Yosemite, recently purchased from the C.P.R. The steamer is expected to be again in service in May, for excursions on Puget Sound.

It is understood that the Department of Marine has decided that a hydrographic survey should be made during the current year of the harbor of Clayoquot, B.C. The survey is made necessary by the increasing number of vessels frequenting the harbor.

It is reported in Victoria that the plans for the consolidation of the shipbuilding yards at B.C. coast points are being worked out by Fowler, Perks & Co., Parliamentary solicitors, London, Eng., and that some of the British steel shipbuilders and engineers are interested.

The Alaska Steamship Co. has had plans prepared for the erection of a wharf on Humbolt St., Victoria, B.C., at a cost of $25,000. The company has a frontage of 251 ft., and it is proposed to construct a fan-shaped wharf, with offices and accommodation for handling freight. The wharf will be built on pontoons so that it will rise and fall with the tide.

The Graham Island Lumber Co. has chartered a small steamer to run between Ketchikan and Masset, B.C. It has also arranged for two steamers having a capacity of 3,000,000 ft., each to carry lumber from Graham Island, the northernmost of the Queen Charlotte group, to Mexico and Southern California. W. Shannon, of Vancouver, is one of the principal men in the company.

The Dominion Government str. Quadra has been instructed to patrol the west coast of Vancouver Island during Jan. and Feb., for the protection of life and property. An arrangement was made with the owners of the whaling str. Orion some time ago to carry a life-saving equipment, and to be ready to proceed to aid vessels in danger, but it is not considered that the steamer can cover the whole of the coast where the dangers lie.

Sault Ste. Marie Canals Traffic

The following commerce passed through the Sault Ste. Marie canals during 1906:

ARTICLES.			CANADIAN CANAL	U.S. CANAL	TOTAL
Copper	Eastbound	Net tons	8,061	99,572	107,633
Grain	"	Bushels	16,674,508	37,661,898	54,336,406
Building stone	"	Net tons	....	6,222	6,222
Flour	"	Barrels	2,393,454	4,091,300	6,484,754
Iron ore	"	Net tons	2,903,397	32,453,645	35,357,042
Iron, pig	"	Net tons	3,383	17,536	20,919
Lumber	"	M. ft. B.M.	46,464	854,167	900,631
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	34,293,527	49,977,831	84,271,358
General merchandise	"	Net tons	91,192	59,394	150,586
Passengers	"	Number	16,733	15,072	31,805
Coal, hard	Westbound	Net tons	138,992	872,383	1,011,375
Coal, soft	"	"	1,094,249	6,634,006	7,728,255
Flour	"	Barrels	1,872	8,724	10,596
Grain	"	Bushels	6,749	....	6,749
Manufactured iron	"	Net tons	83,401	286,785	370,186
Salt	"	Barrels	96,482	371,680	468,162
General merchandise	"	Net tons	501,764	482,501	984,265
Passengers	"	Number	15,375	15,853	31,228
Freight—Eastbound		Net tons	4,736,949	36,847,956	41,584,905
" Westbound		"	1,833,839	8,332,336	10,166,175
Total freight		"	6,570,788	45,180,292	51,751,080
Vessel passages—		Number	5,680	16,475	22,155
Registered tonnage		Net	6,308,531	34,789,793	41,098,324

Comparative statement of commerce through the Sault Ste. Marie canals for the seasons of 1905 and 1906:

ITEMS		TOTAL TRAFFIC		CHANGE	
		1905	1906	Amount	Per cent.
Vessels—steamers	Number	17,197	18,138	941	+5
" sailing	"	3,263	2,817	446	−14
" unregistered	"	1,219	1,200	19	−2
" Total	"	21,579	22,155	476	+2
Lockages	"	13,792	14,523	731	+5
Tonnage—registered	Net	36,617,699	41,098,324	4,480,625	+12
" freight	"	44,270,680	51,751,080	7,480,400	+17
Passengers	Number	54,204	63,033	8,829	+16
Coal—hard	Net tons	984,701	1,011,375	26,674	+3
" soft	"	5,524,355	7,728,255	2,203,900	+40
Flour	Barrels	5,772,719	6,495,350	722,631	+13
Wheat	Bushels	68,321,288	84,271,358	15,950,070	+23
Grain (other than wheat)	"	39,229,553	54,343,155	15,113,602	+39
Manufactured and pig iron	Net tons	237,696	391,105	153,409	+65
Salt	Barrels	423,122	468,162	45,040	+11
Copper	Net tons	106,520	107,633	1,113	+1
Iron ore	"	31,332,637	35,357,042	4,024,405	+13
Lumber	M.ft.B.M.	966,806	900,631	66,175	−7
Silver ore	Net tons.	41	....	41	−100
Building stone	"	10,899	6,222	4,677	−43
General merchandise	"	836,583	1,134,851	298,268	+36

In 1906 the Canadian canal was opened April 14 and closed Dec. 22, season 253 days. The U.S. canal was opened April 13 and closed Dec. 17, season 249 days.

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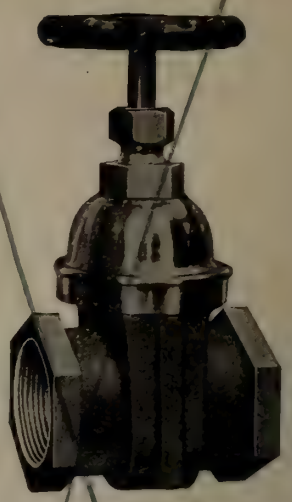

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E. S. Cooper, Winnipeg, has been at Ottawa interviewing the Government departments with a view of securing improvements to aid navigation on the Red and Assiniboine rivers.

Capt. Ross has returned to Medicine Hat, Sask., from B.C., where he has been purchasing lumber for the construction of a steamer for the South Saskatchewan River. The machinery has been purchased in Chicago, Ill.

The condition of the South Saskatchewan River at The Elbow, Sask., is causing considerable anxiety to many people in the vicinity. It is apparently making a new channel for itself, and appears to be cutting an outlet into the Qu'Appelle River valley.

Capt. Barbour, master of the str. Northern Light, trading on Lesser Slave Lake and adjacent waters, has been in Ottawa, with a view of impressing upon the Government the necessity of improving the navigation in these northern waters. The deepening of the Lesser Slave River is the particular portion of the route to which Capt. Barbour has directed attention.

Province of Quebec Marine.

N. Rioux, who died at Quebec, Jan. 1, was a member of the Quebec Harbor Commission.

L. Reford, brother of R. Reford, ship broker and agent, Montreal, died in Toronto, Jan. 8, aged 83.

The Montreal Marine Underwriters' Association has become affiliated with the Montreal Board of Trade.

Capt. A. Robillard, master of the Richelieu and Ontario Navigation Co.'s str. Berthier, died in Notre Dame Hospital, Montreal, Jan. 7.

A. J. C. Robertson, naval architect, Montreal, delivered the first of a series of four lectures on ships and shipbuilding, in Montreal, Jan. 17.

An order-in-council has been passed approving of regulations for the operation of the railway swing bridge over the St. Charles River at Quebec.

R. La Rue has been appointed by the Dominion Government its representative on the Quebec Harbor Commission, to succeed the late N. Rioux.

E. Guerin, K.C., who has been appointed a Judge of the Superior Court for Montreal district, was local commissioner of the Montreal Pilots' Court during its existence.

The Quebec Transportation and Forwarding Co. is giving its eight vessels a thorough overhaul at Quebec in preparation for the season of navigation of 1907.

The Richelieu and Ontario Navigation Co. is discussing the construction of a new steamer for the Montreal-Quebec run with representatives of the Fairfield Engineering Co., Glasgow, Scotland.

F. Gunn, Quebec, has purchased the wreck of the iron ship Dybraag, which went ashore near the Government wharf, Escoumains, Que., in Nov. It is expected to float the vessel in the spring.

The Montreal Transportation Co. is having built on the Clyde, Scotland, two steamers for the purpose of carrying steel rails between Sydney, N.S., and Fort William, Ont. Capt. R. Fraser is in Scotland looking after the completion of the steamers.

The owners of coasting steamers trading between Ste. Anne de Beaupre and Murray Bay have petitioned the Dominion Government for the necessary light protection to enable them to navigate their vessels after dark between Cape Brule and Ste. Anne de Beaupre.

The suits arising out of the collision July 5, 1906, between the steamer Gaspesian and the Montreal Grain Elevating Co.'s floating elevator no. 7, have been consolidated, and have been ordered for trial at Quebec, Feb. 5. The evidence on the part of the Montreal Grain Elevating Co. will be taken later on at Montreal.

An effort is being made in Stanstead, Que., and vicinity, to form a company to put a new steamer on Lake Memphremagog. It is suggested that a steamer 120 ft. long, with a capacity for 200 passengers and a speed of 18 miles an hour, be purchased. Capt. H. W. Mann, of Manchester, N.H., is active in the promotion of the company.

The reports of trade on Lake Champlain and its connecting waters in the U.S. and Canada showed that 414,662 tons of freight were cleared, against 360,519 tons in 1905. Coal shipments to Canada show a falling off and iron ore shipments had also decreased. The report states that there is a scarcity of vessels, and that more towing power is required.

Press reports were current in Montreal early in Jan. to the effect that the C.P.R. had approached the directors of the Richelieu and Ontario Navigation Co. with a view of purchasing the company's steamers and entire business. R. Forget, President R. and O. N. Co., is reported as saying Jan. 6 that he had heard something of the matter, but was not prepared to make any official announcement.

The North Shore Transportation and Wrecking Co. has been incorporated under the Dominion Companies' Acts, with a capital of $250,000 and offices at Quebec, for the purpose of building, repairing, selling and navigating vessels, buying and selling steel, iron and other material entering into the construction of vessels; to float or raise sunken or wrecked vessels and cargoes, and various other purposes connected with the ownership and navigation of vessels. The provisional directors are: J. B. A. Martin, D. Hatton, Montreal; T. and A. Gagnon, J. B. D. Leglare, J. A. Fafard, and Capt. O. S. Bernier, Quebec. It is proposed to start a steamer on a regular run between Quebec and Natashquan about April, and to engage in the fishing and fur trade along the north shore of the St. Lawrence.

Under the terms of sec. 2 of an act passed last session of the Dominion Parliament respecting the Harbor Commissioners of Montreal, a proclamation has been issued by the Governor-in-Council, declaring that the act came into effect Jan. 1. By the terms of the act, the constitution of the Harbor Commission as heretofore existing was determined, and the control of the harbor placed in the hands of three commissioners to be appointed by the Government, such commissioners to be paid salaries and to devote the main portion of their time to the duties. The appointment of G. W. Stephens, L. E. Geoffrion and C. C. Ballantyne, Montreal, was notified in the Gazette, Dec. 29, as members of the corporation of "The Harbor Commissioners of Montreal," to date from Jan. 1, 1907. The first named is designated President of the corporation. G. W. Stephens is President of the Canadian Rubber Co., L. E. Geoffrion is a wholesale grocer and provision merchant, and C. C. Ballantyne is associated with a number of industrial concerns. At the first meeting of the new Commission, Jan. 2, G. W. Stephens, the chairman, said: "We commissioners came down here in good faith; we have taken office under the present Government on the understanding that we shall organize the business of the office to be operated on a business basis. If the Government keep faith with us we will stay, and if they do not we will not stay. Personally, I will not stay here five minutes if we are going to be plastered up with influence which we cannot control."

The Loss of the Resolute.

Following is the decision of Commander Spain, R.N., Dominion Wreck Commissioner, who, assisted by Capts. T. Donnelly and J. Trowell as assessors, held an enquiry into the foundering of the steamboat Resolute near the western entrance to Toronto Harbor, on Nov. 22, 1906: "That the S.S. Resolute was, as far as can be ascertained, both by the Hull and Steamboat Inspectors' reports, in a sound and seaworthy condition, and well fitted and equipped for the service in which she was employed; That the officers and crew were in accordance with the Government rules and customs of the trade in which the ship was employed, with the exception of Haney, the first mate, who did not hold a Canadian certificate of any description, and the court considers that the owners of the vessel are responsible for this man being on board the ship without proper qualifications; That the Resolute was navigated in a seamanlike manner, but, owing to the very heavy sea, and the shallowness of the entrances to Toronto harbor, she was unable to enter the port; That, after anchoring under the lee of Toronto Island, two efforts were made to enter the port of Toronto by the only available entrance, that is to say, the Eastern Gap, but this was found impossible; That all measures were taken for the safety of the vessel, and that no disaster was anticipated until a few minutes previous to the foundering of the ship, which was caused by water entering the hull of the steamer from some source which the court was unable to determine, owing to the impossibility of procuring any evidence in regard to it; That the sudden change from comparative safety to the foundering of the steamer prevented more efficient measures being taken for the preservation of the crew by the use of life preservers, and the better handling of the lifeboats; That Capt. John Sullivan, Marine Superintendent of the Company, who was on board the ship at the time, though not actually in command, made every effort towards the safety of the vessel, by going ashore to ascertain the depth of water in the western channel, and, having then found out that a heavy gale was expected, in returning to the ship; and his subsequent efforts towards the safety of the steamer, and the preservation of the crew, deserve credit. The court considers that, if Capt. Sullivan had not been washed overboard immediately after notifying the crew to take to the boats, more lives might have been saved."

Niagara Navigation Company, Limited.

The report for the year ended Nov. 30, 1906, presented at the annual meeting in Toronto Jan. 8, stated that the failure of the builders to complete the new steamship Cayuga in time for service during the season of 1906 was a disappointment. A reduction of the price was made on account of delay in delivery. The trial trips were most satisfactory, and the vessel will be ready for the season of 1907. The cost of the Cayuga has been nearly covered by cash on hand and proceeds from the sale of stock, so that of the bonds authorized it will probably suffice to sell only whatever

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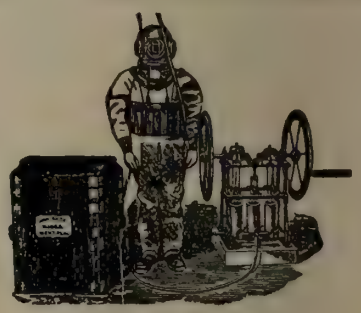

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may be required to take up the old bonds which matured Jan. 2,. 1907. Following are the financial statements:

ASSETS

Steamers	$672,125.00	
Less 5% written off	33,606.25	
		$638,518.75
Real estate, wharves, etc.	52,500.00	
Less written off	2,500.00	
		50,000.00
Stores		1,480.69
Accounts receivable	$1,789.45	
Less written off	535.75	
		1,253.70
Cash on hand and in bank		46,677.42
S.S. Cayuga construction account		266,137.90
		$1,004,068.46

LIABILITIES.

Capital stock authorized, $1,000,000.00 Subscribed and paid	$701,700.00
Debentures outstanding, 4½%	111,000.00
Interest accrued on same	2,081.25
Accounts payable	1,572.13
Dividend 4% payable Jan. 2, 1907	28,068.00
Dominion Bank special account	35,693.29
Balance forward	123,953.79
	$1,004,068.46

PROFIT AND LOSS.

Balance at credit from previous year.		$ 98,002.16
Net earnings, 1906		123,724.63
		$221,726.79
12 months' interest on debentures		4,995.00
5% written off steamers		33,606.25
Written off real estate, wharves, etc., and accounts		3,035.75
Dividend 4% paid July 2, 1906	$28,068.00	
Dividend 4% payable Jan. 2, 1907	28,068.00	
		56,136.00
Balance carried forward		123,953.79
		$221,726.79

The old board was re-elected with the exception of R. H. McBride, who was replaced by W. D. Matthews. The directors for the current year are: President, E. B. Osler; Vice-President, Barlow Cumberland; other directors: Hon. J. J. Foy, J. Bruce Macdonald, C. Cockshutt, Col. J. S. Hendrie, W. D. Matthews.

Notices to Mariners.

The Department of Marine has issued the following notices to mariners:—

No. 149. Dec. 5.—Nova Scotia—368. Bay of Fundy, Chignecto channel, Cumberland basin, buoys established. 369. Bay of Fundy, Basin of Minas, mouth of Avon River, Crossbars shoal gas buoy to be removed for the winter. 370. West coast, Port Maitland, fog bell established at lighthouse. 371. South coast, off Cape Canso, Roaring Bull rock, change in position of buoy. 372. North coast, Tatamagouche bay, Brule harbor, buoys established.

No. 151. Dec. 7.—New Brunswick—374. South coast, Shepody River, wreck removed. 375. East coast, Strait of Northumberland, Cape Tormentine, range lights maintained throughout the year.

No. 152. Dec. 10.—Nova Scotia—376. Northumberland strait. Pictou Island west wharf, lighthouse established.

No. 153. Dec. 13.—General—377. Numbering of Canadian lightships.

154. Dec. 14.—Ontario—378. Lake Ontario, west end, Bronte, light house established.

No. 155. Dec. 13.—British Columbia—380. Graham Reach, Swanson bay, wharf erected.

No. 156. Dec. 15.—Nova Scotia.—381. West coast, Yarmouth Sound, John's Cove ledge, buoy established. New Brunswick—382. East coast, Miramichi Bay, Sheldrake Island, range lights, intended change in illuminating apparatus.

No. 157. Dec. 18.—Quebec—388. Saguenay River, Grosse Roche, lighthouse established. 389. River St. Lawrence below Quebec, Island of Orleans, St. Laurent, change in color of freight shed and lantern.

No. 158. Dec. 21.—British Columbia—391. Chatham Sound, Prince Rupert harbor, gas buoys to be established. 392. Chatham Sound, Prince Rupert harbor, gas-lighted beacons to be established.

No. 159. Dec. 26.—British Columbia—393. Vancouver Island, west coast, Barkley sound, Sechart channel, eastern entrance, Swale rock, light not shown temporarily.

No. 160. Dec. 26.—Newfoundland—394. South coast, Port Basque, channel head, change in fog alarm.

No. 161. Dec. 28.—Nova Scotia—396. West coast, Yarmouth harbor, Bunker Island, north end, lighthouse established. Newfoundland—397. North coast, Strait of Belle Isle, Cape Norman, change in fog alarm.

For the purpose of identifying them, all Canadian lightships will hereafter be numbered on a system already established. These numbers will be kept by the several vessels unchanged, even if they change their stations. The numbers allotted are as follows:—

Number.	Present Station.	No. in List of Lights.
1	Barrington	241
2	Miramichi	869
3	Red Islet	1107
4	Upper Traverse (not now in use)	
5	White Island reef	1142
6	Pointe à la Garde	963
7	Prince shoal	1109
8	Lake St. Peter, east	1330
9	" " centre	1336
10	" " West	1339
11	Lake St. Louis, east	1506
12	" " centre	1508
13	" " west	1512
14	Lurcher	198
15	Anticosti	1040
16	Fraser river	2309

Hereafter the number of each vessel is to be painted in white on her topsides, in addition to the name of her station.

The following have been issued by the U.S. Hydrographic office:

No. 1. Jan. 5.—Lake Superior—1. Portage Lake, Rouleau Point range lights moved.

No. 2. Jan. 12.—Lake Ontario—35. Niagara River mouth, shoal spot, further information.

Prince Edward Island Car Ferry.

In connection with the project under discussion at Charlottetown, P.E.I., for the establishment of a car ferry between Prince Edward Island and the mainland, it is reported that a capital of about $250,000 has already been promised, the subscribers including W. E. Weeks, G. E. Fall, L. E. Prowse, E. Heartz, G. E. Hughes, B. Stewart, N. Rattenbury, G. Auld, J. A. Farquharson, G. H. Toombes, E. H. and F. H. Beer, all of Charlottetown. A car ferry between Charlottetown and Pictou, N.S., for instance, would mean a great deal in the saving of handling freight. A car ferry would take I.C.R. cars to Charlottetown, where they would be switched off to broad gauge tracks parallel to the P.E.I. Ry. narrow gauge tracks, and the transferring would be done from one car to another. The loading would be done in the same way, the I.C.R. cars being loaded at Charlottetown and going through to their various destinations. The handling of perishable freight, such as potatoes, eggs, oysters, fresh meats and fish of all kinds, which constitutes the bulk of the trade from P.E.I., injures it considerably. With a regular car ferry service the refrigerator cars would be loaded at Charlottetown and iced, thereby ensuring good condition at destination. The unloading of freight from cars into the warehouse, from the warehouse to the steamer, from the steamer at Charlottetown into the warehouse, and out of that into cars again means a great deal of time and costs considerable. In addition to all that the winter steamers have never been able to make the round trip between Pictou and Charlottetown in one day, for the reason of the time taken in discharging and reloading, which generally occupies not less than 12 hours. With a car ferry service it is expected that the loading and unloading would occupy a few minutes only so that daily round trips could be made with plenty of time to spare. The ultimate result of the establishment of such a car ferry service, would probably be the conversion of the P.E.I Ry. from a narrow to a standard gauge railway.

Among the Express Companies.

The Dominion Ex. Co. is investigating the burning of a carload of express matter between Toronto and North Bay, Ont., Dec. 24.

R. Murphy has been appointed General Agent Canadian Ex. Co., and F. W. Holland, assistant to the General Agent at Montreal.

I. Hertel, Canadian Ex. Company's agent at Waterloo, Ont., has been transferred to the company's office in London, Ont., as chief clerk.

The Great Northern Ex. Co. has placed its service on the Vancouver, Victoria and Eastern Ry., and its U.S. continuation, the Washington and Great Northern Rd., between Curlew, Wash., and Molson, Wash. The offices are at Bergen, Myncaster, Syackan, and Bridesville, Wash., and Molson, B.C.

Canadian Ex. Co. officials state that the company transported 3,100 carcases of deer, having an aggregate weight of 318,215 lbs., over the northern and Ottawa divisions of the G.T.R., during the 15 days' open season of 1906. During the season of 1905 the company carried 2,796 carcases of deer, having an aggregate weight of 306,395 lbs.

The Dominion Ex. Co. is continuing to operate over the Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.'s railway between Regina and Prince Albert, Sask., although the line has been transferred to the Canadian Northern Ry. When the Dominion Ex. Co.'s contract expires, the Canadian Northern Ex. Co. will place its service in operation over the line.

Telegraph and Cable Matters.

The Temiskaming and Northern Ontario Ry. Commission has decided to string a fourth telegraph line from North Bay to Cobalt.

J. Oppe, Managing Director for Canada for the Marconi Wireless Telegraph Co., Montreal, was married in that city, Jan. 8, to Miss S. Stephen.

H. P. Dwight, President G.N.W. Telegraph Co., Toronto, received the congratulations of his friends, Dec. 23, 1906, upon the 78th anniversary of his birth.

S. Edwards, heretofore Assistant Superintendent C.P.R. Telegraphs, Winnipeg, Man., has been appointed Superintendent Western Division, with office at Calgary, Alta.

The New Brunswick Telephone Co.'s system at St. John, N.B., has been connected with the Marconi wireless telegraph station, so as to facilitate the reporting of vessels arriving in the port.

The Anglo-American Telegraph Co.'s Cable between Prince Edward Island and the mainland, was broken Jan. 5, and for several days there was no telegraphic communication with the outside world.

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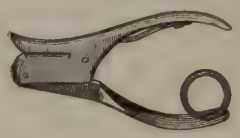

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OWEN SOUND, ONTARIO

The U.S. cable str. Burnside arrived at Ketchintan, Alaska, Dec. 24, and completed a cable connection with Fort Wrangle and other points on the southeastern coast of Alaska, as well as with Seattle, Wash.

C. H. Reynolds, Manager of the All-British Pacific Cable, who has returned to London, Eng., after a tour of organization in Australia, and a visit of inspection of the Canadian office in Vancouver Island, states that at present there is no possibility of a reduction of rates over the route.

The De Forest Wireless Telegraph Co. is appealing against the Quebec city tax of $1,000, on the ground that at the time this tax on telegraph companies was imposed, there was no such thing as wireless telegraphy, and that the tax was only for those companies which used poles, wires, etc. The Recorder has reserved judgment.

The De Forest Wireless Telegraph Co. is reported to have submitted a proposal to the Dominion Government to take over the Government telegraph line from Ashcroft, B.C., to Dawson, Yukon. The company asks for a subsidy of $50,000 for the installation of its plant, and a further subsidy of $50,000 for its maintenance each year it is in operation.

The C.P.R. Telegraph Department is continuing to operate a commercial service between Regina and Prince Albert, Sask., along the line of the Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co., and it is understood will do so for some time yet. A date for the withdrawal of the C.P.R. telegraph service is under arrangement between the head offices of the C.P.R. and the Canadian Northern Ry.

The British Government has promised to appoint a Select Commission to enquire into the proposals embodied in the wireless telegraph conference recently held in Berlin, Germany, previous to the ratification of the convention. The Postmaster-General stated that the British delegates to the wireless telegraph conference secured all they were instructed to get, but as the convention would not be ratified for some time, there would be no harm in appointing the Select Commission.

Montreal Telegraph Company.

The sixtieth annual meeting was held in Montreal Jan. 10. The report showed assets of $2,151,823. These consist of: telegraph lines in Canada and the U.S., $1,625,890; telegraph cables in Canada and the U.S., $33,487; telegraph offices and equipment of offices in Canada and the U.S., $212,500; real estate in Montreal, Ottawa, Quebec, and Toronto, $279,946; and cash, accounts receivable, bonds and other securities and real estate (not included in lease to Great North Western Telegraph Co., $138,558. The liabilities are made up as follows: Shareholders' capital, $2,000,000; excess in value of property operated by G.N.W. Telegraph Co. over shareholders' capital, $151,823; dividend payable January 15, 1907, $40,000; unclaimed dividends, $460; and contingent fund, $98,098. The dividend guaranteed by the Western Union Telegraph Co. under the terms of the agreement of Aug. 17, 1881, was distributed in the usual manner and on the fixed dates, with a payment of 10c a share to shareholders of record of Sept. 30 last. The company continues free from debt or encumbrance of any kind.

The report was adopted and the retiring directors were re-elected. The officers and directors for the current year are: President, A. J. Allen; Vice-President, A. T. Paterson; other directors: W. Wainwright, W. McMaster and W. R. Miller.

C.P.R. Telegraph-Telephone Circuit

Two of the C.P.R. telegraph duplex circuits between Montreal and Winnipeg are operated on 210-lb. copper wires with repeaters at Fort William, Ont. These two wires are transposed every half mile and a telephone circuit is being worked between Montreal and North Bay on the same two wires. The telephone circuit was thrown into service on Dec. 11, and it was found to work exceedingly well, being almost as silent as the regular city telephone circuits. The distances are: Montreal to North Bay, 360 miles; North Bay to Fort William, 635 miles; Fort William to Winnipeg, 427 miles; a total of 1,422 miles.

The voltage used for the duplexes at Fort William and Montreal is 200. On the same line of poles for the whole distance there is a wire on which is being worked the phantoplex between Montreal and North Bay without disturbing the conversation on the telephone circuit. This has been a complete surprise to the officials and to a number of experts in New York, as it was expeeted it would be necessary to abandon the phantoplex in order to obtain a satisfactory telephone circuit.

This is thought to be the first instance where a telephone circuit is worked on two duplex wires with one of the telephone offices being located at a point where there are no telegraph repeaters. It is contemplated adding other telephone circuits on the C.P.R. telegraph system, the whole matter being in charge of W. J. Camp, the electrical engineer. Telegraph Age.

General Telephone Matters.

The Caledonia Telephone Co. has been granted a franchise by the village council of Caledonia, Ont.

The telephone line recently strung at Byron, Ont., is being extended to Komoka, an adjoining village.

J. J. Tilley, local manager Bell Telephone Co., Lindsay, Ont., was presented with a smoking set by the staff, Dec. 25.

The Bell Telephone Co. is constructing a line in North Battleford, Sask., and is installing an exchange in the towns on both sides of the river.

The Calgary, Alta., Board of Trade has passed a resolution calling upon the City Council to proceed with the installation of a municipal telephone system.

The North Vancouver, B.C., Board of Trade has passed a resolution opposing a proposed application of the B.C. Telephone Co. for a Dominion subsidy.

The Board of Railway Commissioners has issued an order requiring telephone companies to keep their tariffs on file for inspection by the public during business hours.

The Moncton, N.B., City Council by majority of one decided to apply to the New Brunswick Legislature for an act authorizing it to establish a municipal telephone system.

T. A. Wright, heretofore Assistant Superintendent Nova Scotia Telephone Co., Halifax, N.S., has resigned to enter the service of the Commercial Telephone Co., of Port-of-Spain, Trinidad.

Telephone poles are reported to be very scarce at the present time, and the scarcity is considered likely to affect the construction of new lines, of which a very extensive mileage is projected in Canada during the current year.

The municipality of South Norfolk, Man., passed a resolution, Jan. 4, expressing the opinion that the Government should control the long distance telephone lines only, the municipalities retaining control of the local exchanges.

A representative of the Bell Telephone Co. recently stated that if the London, Ont., City Council did not accept its offer of $4,000 for an exclusive franchise, it would continue doing business in the city and the offer would be withdrawn. There will not be any reduction in the rates.

Application will be made next session of the British Columbia Legislature for an act incorporating a company with power to construct telephone lines throughout the whole of Yale county. E. Bloomfield, Victoria, B.C., is solicitor for the applicants.

The Municipal Union of Manitoba has prepared a lengthy statement showing the various amendments which it considers advisable should be made in the law so as to render the proposed provincial and municipal telephone system a success.

F. W. Dewar, local manager Bell Telephone Co., Woodstock, Ont., has been transferred to a similar position at Niagara Falls, Ont., succeeding B. Douglas, transferred to Owen Sound, Ont. K. Weldren, formerly at Owen Sound, succeeds F. W. Dewar at Woodstock.

The Macleod, Alta., Telephone Co. is making preparations for the general improvement of its telephone system. New poles are to be put up, some cables are to be laid, and other improvements made, so as to be in readiness for the long distance lines which are now under construction.

The total receipts of the municipal telephone line at Fort William, Ont., for 1906, were $12,628, and the expenses were $9,328. Included in the expenses are provision for a sinking fund, and a depreciation fund of 10% of the gross receipts. There are 775 telephones in use in the town.

The Wallacetown and Lake Shore Telephone Association's officers for the current year are: President, T. Lunn; Vice-President, J. Watkins; Secretary-Treasurer, Dr. J. W. Crane; other directors: G. Braddon, J. Steele. A dividend of 6% was declared on the working for 1906, $100 was voted to a sinking fund, $70 to a contingent fund, and $30 to the Secretary.

The Bellechasse Telephone Co. is applying at the current session of the Quebec Legislature for an act amending its charter, changing its name to the National Telephone Co., increasing its capital to $5,000,000; giving the right to issue debentures to the like amount, allowing it to expropriate property, and to establish telephone and telegraph lines throughout the province.

The Strathcona and Edmonton, Alta., councils are discussing terms for the construction of a joint municipal telephone service. It is understood that Edmonton proposes to string a 300-cable to Strathcona and to connect the Edmonton automatic board direct, making one big central for both towns, and giving Strathcona exactly the same telephone service at the same price as Edmonton gets.

The Bonaventure and Gaspe Telephone Co. is the title of a company for which an act of incorporation is being asked at the current session of the Dominion Parliament. Power is being asked to construct and operate telephone and telegraph lines in Quebec and New Brunswick; to acquire lands and water powers along the route of its lines, and to develop and sell electric power. J. H. Kelly, New Carlisle, Que., is solicitor for the applicants.

The Bell Telephone Co. has notified the Montreal City Council that it has decided to bury all its wires in the city, and desires to discuss the plans for the work with the council. A meeting for this purpose will be held at an early date. In connection with the proposal the Montreal City Council is applying at the current session of the

THE LATROBE COUPLER

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Quebec Legislature for additional powers in connection with the construction of conduits for electric wires in the city.

The route for the proposed long distance telephone line which the Alberta Government proposes to construct during the year, will be from Edmonton along the section and range lines, in the general direction of the Canadian Northern Ry. to Lloydminster, about 200 miles. Every town on the railway will be connected with the line, and later on branch lines will be strung so as to give telephone connection to the places off the railway. Work upon the line is to be started as early in the spring as possible, and as soon as it is well in hand, the Government proposes to go on with the construction of a line from Edmonton to Athabasca Landing. Plans for the construction of telephone lines in Southern Alberta are under consideration.

Manitoba's Public Telephone Service.

The final result of the voting in Manitoba upon the proposal to establish a Government and municipal telephone service, shows that the by-law was carried in 55 municipalities and rejected in 68. The policy of the Government was announced in the Lieut.-Governor's speech at the opening of the Manitoba Legislature, Jan. 3, which said: "The recent vote on the principle of a public-owned system of telephones has been accepted as a declaration of approval, and my Gov-

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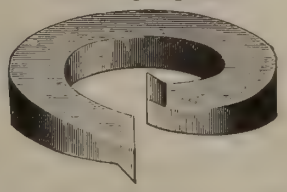

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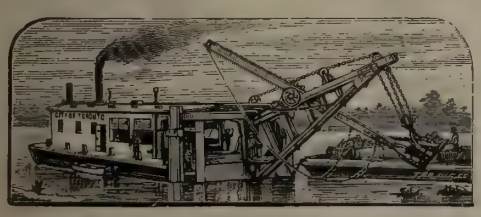

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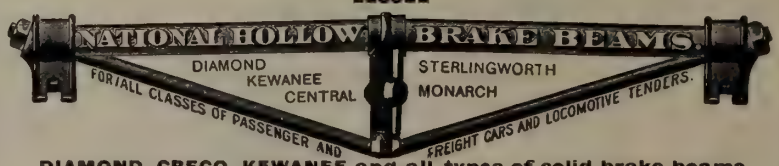

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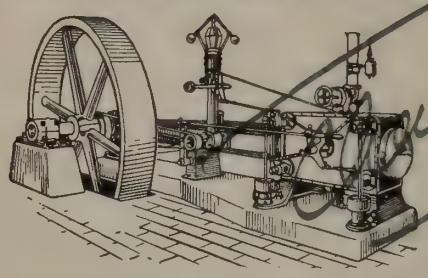

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NOTICE TO SHAREHOLDERS

THE Annual Meeting of the Shareholders of this Company will be held on Wednesday, 13th day of February next, at the Head Office of the Company in Kingston, at Eleven o'Clock A.M., for the purpose of electing Directors and transaction of other business.

The Stock Transfer Books will close in New York on Saturday, 2nd day of February, 1907, at 1 p.m. All Books will be re-opened on Thursday, 14th of February.

ARCHIBALD McNAUGHTON,
Secretary and Treasurer.

Kingston, January 3rd, 1907.

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ernment has already taken the necessary steps to construct at least 1,000 miles of long distance lines this coming summer, which is a guarantee of reduced rates for that very important service." In an interview the Premier stated that the question of the routes of these lines was under consideration, but generally it was the intention of the Government to construct in the first instance through those municipalities which have given a majority of votes in favor of public ownership, starting at Winnipeg and building west and south. The question of the construction of municipal exchanges and rural lines rested entirely with the municipalities. At a meeting of the executive of the Liberal party in the Province Dec. 28, a resolution was passed declaring in favor of complete government ownership and operation of a provincial telephone system. Tenders for poles were received to Jan. 15, the specifications calling for 5,000 poles 30 ft. long, and 45,000 of 25 ft. long, to be delivered at the rate of 10,000 a month from April 1.

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Axe Steel
Montreal Steel Works.....Montreal.

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Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Jas. W. Pyke & Co.....Montreal.
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The Hudson's Bay Co.....

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Locked Wire Fence Co.....London, Ont.

Flags
The Hudson's Bay Co.....

Flour
The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

Forgings
Crossen Car Mfg. Co.....Cobourg, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gas Buoys
Willson Gas Buoy Co.....Ottawa.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound. Ont.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Grain Elevators
John S. Metcalfe Co.....Chicago, Ill.

Groceries
The Hudson's Bay Company.....

Hammers
James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg, Ont.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

Hose, Air Brake and Steam
The Canadian Rubber Co. of Montreal

Hose, Fire
The Canadian Rubber Co. of Montreal.

Hose, Suction
The Canadian Rubber Co. of Montreal.
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspection Cars
Canada Cycle and Motor Co..Toronto Junc., Ont.

Inspections
R. W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron, Pig
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Iron Signs
Acton Burrows Limited.....Toronto.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
McCord & Co.....Chicago, Ill.

Lager Beer, &c.
E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton, Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Lathes
H. W. Petrie.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H. Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.

Lubricators
McCord & Co.....Chicago, Ill.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.
H. W. Petrie.....Toronto.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

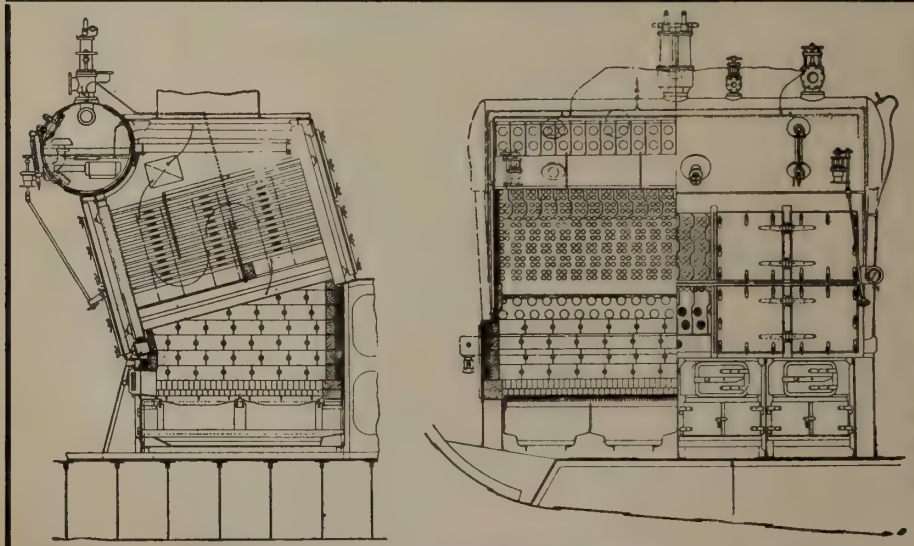
Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Mats and Matting
The Canadian Rubber Co. of Montreal.

Milepost Numbers
Acton Burrows Limited.....Toronto.
Milling Cutters
W. Abbott.....Montreal.
Milling Machines
H. W. Petrie.....Toronto.
Mills, Boring and Turning
H. W Petrie.....Toronto.
Motor Cars
Canada Cycle & Motor Co., Toronto Junc.. Ont.
Motors
McCord & Co.....Chicago, Ill.
Nickel
The Orford Copper Co.....New York.
Nickel for Nickel Steel
The Orford Copper Co.....New York.
Numbers
Acton Burrows Limited.....Toronto.
Nut Locks
Positive Lock Washer Co.....Newark, N.J.
Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.
Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.
Oakum
The Hudson's Bay Company.....
McKenzie & Co.....Montreal.
Office Desks
Canadian Office & School Furniture Co., Preston, Ont.
Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.
Office Railings
Locked Wire Fence Co.....London, Ont.
Office Signs
Acton Burrows Limited.....Toronto.
Oil Tanks
S. F. Bowser & Co., Inc.....Toronto.
Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.
Packing
The N. L. Piper Railway Supply Co....Toronto.
Packing, High Pressure Sheet
The Canadian Rubber Co. of Montreal.
Packing, Piston
The Canadian Rubber Co. of Montreal.
Paints
Canadian Oil Co.....Toronto.
Paints, Damp Resisting
E. F. Dartnell.....Montreal.
Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.
Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.
Pipe Covering
Canadian Fairbanks Co.....Montreal.
Mica Boiler Covering Co.....Montreal.
Pipe Stocks
Butterfield & Co.....Rock Island, Que.
Planers
H. W. Petrie.....Toronto.
Plating Compositions
F. B. Stevens.....Detroit, Mich.
Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Plumbago
F. B. Stevens.....Detroit, Mich.
Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N J. Holden Co.....Montreal.
Polishers' Supplies
F. B. Stevens.....Detroit, Mich.
Polishing Compositions
F. B. Stevens.....Detroit, Mich.
Porter
E. L. Drewry.....Winnipeg.
Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.
Power Houses
Steel Concrete Co. (Ltd.).....Montreal.
Preservative for Wood
Carbolite Carbolineum Co.....Toronto.
Printing
The Hunter, Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.
Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.
Pumps
S. F. Bowser & Co., Inc.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.
Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.
Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.
Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
T. A. Morrison & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rail Joints
Continuous Rail Joint Co. of Canada...Montreal.
N. J. Holden Co.....Montreal.
Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.
Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.
Reamers
W. Abbott.....Montreal.
Butterfield & Co.....Rock Island, Que.
Receivers, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.
Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.
Refrigerators
Geo. R. Prowse.....Montreal.
Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.
Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.
Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkeville, Ont.
Dominion Bridge Co.....Montreal.
Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....
Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.
Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.
Rubber Tiling, Interlocking
The Canadian Rubber Co. of Montreal.
Sash Balances
O. M. Edwards.....Syracuse, N.Y.
Sash Locks
O. M Edwards.....Syracuse, N.Y.
Saw Steel
Montreal Steel Works.....Montreal.
Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.
Scrap Iron, Etc.
J. W. Townsend.....Halifax, N.S.
Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Screw Plates
Butterfield & Co.....Rock Island, Que.
Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.
Semaphore Arms
Acton Burrows Limited.....Toronto.
Semaphores
The N. L. Piper Railway Supply Co....Toronto.
Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.
Shade Rollers
O. M. Edwards.....Syracuse, N.Y.
Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal
Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Ships
Polson Iron Works.....Toronto.
Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....
Side Bearings
Simplex Railway Appliance Co.....Montreal.



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The Purchasing Agents' Guide—Continued.

Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co....Boston, Mass.

Spikes, Railway, Ship or Pressed
F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville, Ont.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm. C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co..New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston, Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Punches
R. Woodman Mfg. & Supply Co.....Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Tool Steel
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Rubber
The Canadian Rubber Co. of Montreal.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
McKenzie & Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Woodworking Machinery
H. W. Petrie.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

DOMINION STEEL CAR COMPANY, LIMITED

New Plant Now in Course of Construction

ORDERS SOLICITED FOR

Steel Cars, Underframes, Bolsters, Brake Beams and All Parts Steel Car Construction

WORKS
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MONTREAL, QUE.

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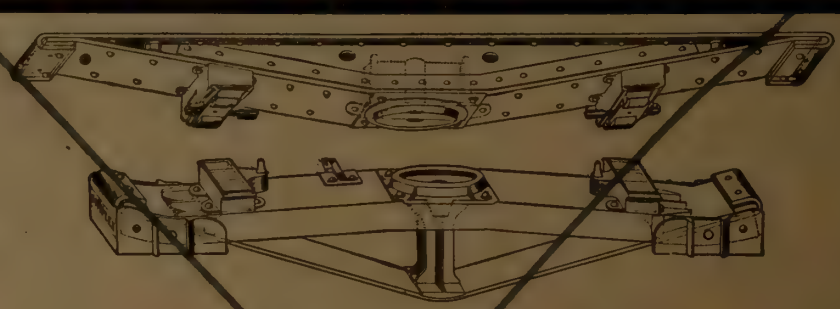

BRAKE BEAMS

SUSEMIHL FRICTIONLESS SIDE BEARINGS

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The SIMPLEX RAILWAY APPLIANCE CO. OF CANADA, Limited.

P. O. BOX 2392, MONTREAL NEW YORK OFFICE—42 BROADWAY

The Railway and Marine WORLD

With which are incorporated The Western World and
The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' Interests

Old Series, No 19[illegible] New Series, No. 10[illegible] TORONTO, CANADA, MARCH, 1907 Subscription, $1 a Year. Toronto Postal Delivery, $1.25 a Year.

THE CANADIAN RAILWAY ACCIDENT INSURANCE COMPANY, OTTAWA, CANADA.

A PURELY CANADIAN COMPANY.

JOHN EMO, General Manager — J. E. DICKSON, Secretary-Treasurer — D. MURPHY, President

AUTHORIZED CAPITAL, $500,000. SUBSCRIBED CAPITAL, $200,000

Issues all classes of Accident and Sickness Insurance at lowest rates as is consistent with safety. . . . . Railroad Employees and Collective Insurance a specialty. . . .

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PUT TOGETHER LIKE A WATCH

THEY NEVER WEAR OUT

READING MULTIPLE GEAR CHAIN HOISTS

ARE THE MOST SERVICEABLE AND SATISFYING HOISTS ON THE MARKET

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Formerly

W. H. C. MUSSEN & CO., MONTREAL

CANADIAN LOCOMOTIVE Co. Ltd.,

KINGSTON, ONT.,

Builders of Simple and Compound **LOCOMOTIVES** Adapted to every variety of service.

H. W. PETRIE Write for my monthly STOCK LIST containing list of all kinds of NEW AND SECOND-HAND **MACHINERY**

TORONTO AND MONTREAL

(SEE ADVERTISEMENT ON PAGE 193)

McCaskill, Dougall & Co., Railway Varnishes, Japans and Enamels, **Montreal.**

MANUFACTURERS

EIGHT MEDALS AWARDED

Interesting Westinghouse Statistics

The Westinghouse Companies operate twenty factories in six different countries, and have nineteen general offices and two hundred and seven district offices and special agencies in eighty-nine cities located in twenty different countries.

For The Dominion of Canada:

Canadian Westinghouse Co., Limited

General Offices and Works: HAMILTON, ONT.

For particulars address nearest office

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152 Hastings Street VANCOUVER	922-923 Union Bank Bldg. WINNIPEG	134 Granville Street HALIFAX

See Purchasing Agents' Guide on page 217

See Alphabetical Index to Advertisements on page 193

THE

Railway and Marine World

With which are incorporated The Western World and The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' interests

Old Series, No. 19[illegible]
New Series, No. 10[illegible]

TORONTO, CANADA, MARCH, 1907.

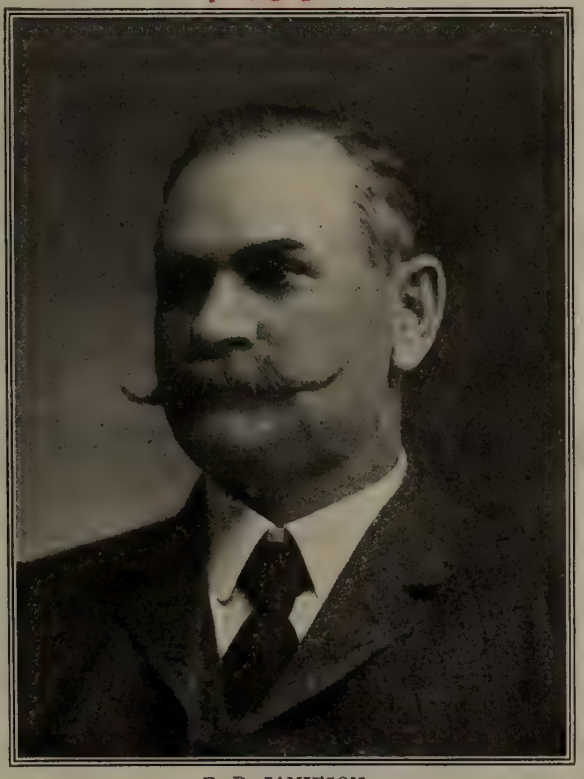
Subscription, $1 a Year.
Toronto Postal Delivery, $1.25 a Year.

The Railway Commission's Work

The Chief Railway Commissioner, A. C. Killam, addressed the Canadian Club in Montreal, Jan. 21, as follows:

When asked to address the Club on the work of the Railway Commission I gladly availed myself of the opportunity to endeavor to disseminate information respecting that body, because I feel that in some respects its functions and its work are not fully understood, and that the more information the public can get about the Commission the better they will appreciate its operations.

The subjects committed to the jurisdiction of the Commission are so numerous that a full discussion of them would occupy much more time than you have placed at my disposal. I am not in the position of a statesman who can announce a policy. The Commission is a judicial body which has to decide in a judicial spirit, on matters that come before it, and it would not be proper for one occupying my position to assume to outline what will be the future policy of the board upon questions on which it has not yet adjudicated. The Board of Railway Commissioners was constituted under an act of the Parliament of Canada passed in 1903, and it came into operation on Feb. 1, 1904. The three commissioners who constitute the the board have under their authority a staff of 31, a number which will have to be considerably increased in the near future. The jurisdiction of the board does not extend—as a great many people seem to think—to all the railways of Canada, but only to those to which the Railway Act applies. The Provincial Legislatures have certain powers to authorize the construction of railways within a province, and to these railways the Dominion Act applies only as to certain specified matters such as crossings over or junctions with Dominion railways, or the exchange of traffic between them and Dominion railways. But the Railway Act, 1903, is full of provisions giving express power to our board over particular matters. Even before railways are constructed we have to approve of location plans, of the gradients and curves proposed, etc., and before they are opened for traffic, they have to be inspected by our engineer and the board must give leave for them to be operated. The plans of their bridges have to be approved by the board; one railway cannot cross another without the board's consent, nor can a railway cross or run along a highway nor can a new highway be opened across a railway without such permission. The board has also certain legislative powers on subjects which Parliament has not seen fit to deal with in detail. We are empowered to make orders requiring railway companies or others to do things that are required by the general railway act, or by the special act relating to the particular railway, or to forbid them to do that which these acts forbid. The board is a court of record with the same power to enforce its judgments as superior courts have. The Governor-General-in-Council is given jurisdiction to set aside or vary any order of the board, and to the Governor-General-in-Council an appeal lies, but that is the only general appeal. In cases where it is claimed we have exceeded our jurisdiction, an appeal may be had to the Supreme Court of Canada by leave of one of the judges of that Court; in certain other matters an appeal may be had to the Supreme Court by leave of the board itself. These are the remedies available to those who think the board has done wrong. But, although the board is constituted a court, it is constituted a court only for the purpose of exercising the jurisdiction that is given it by statute; it has not a general jurisdiction to determine all disputes between the public and railway companies. We have nothing to do with the contracts which railway companies enter into with the public, except so far as they may incidentally come into consideration in the exercise of the powers specifically given to us. We have no power to enforce these contracts as such, to give damages for their breach, or to compel obedience to them, By the laws of the different provinces the relation between carriers, and shippers, or consignees, give rise to numerous obligations and liabilities which it is not the duty of our board to enforce. These arise under the provincial laws and are regulated by the courts of the different provinces. The duty of the board is simply to enforce the Railway Act, and nothing else. Persons may complain we are not doing our duty because we do not compel the railway companies to do something or other, but we would be usurping functions which do not belong to us were we to go outside the jurisdiction that Parliament has conferred upon us, and attempt to regulate railways in all matters.



R. R. JAMIESON,
General Superintendent Western Division Canadian Pacific Railway.

Probably, you will be more interested in matters relating to freight tariffs and rates, and to the facilities which railways are bound to afford the public, than in any other phase of the question. The board is invested with very large powers respecting the rates and tolls to be charged for transportation on railways. We have power to prescribe the classification of goods for the purpose of determining the tolls to be charged for their carriage. The tariffs are made with regard to these classes by the railway companies primarily, but the railway companies have special commodity rates which, though they may be included in a particular classification are, it is thought, properly to be considered subjects of separate and different treatment. The principle upon which the Railway Act proceeds in regard to the tariffs of railways is this: The railway companies are required to make up what are called standard tariffs, in which they give the maximum tolls according to mileage, which they are entitled to charge for passenger traffic or for the different classes of freight traffic. These tolls are approved by the board and they cannot be exceeded, nor can railways charge anything for the carriage of goods until these standard tariffs are approved. Then the railway companies are allowed to make what are called special tariffs for the carriage of these different classes or of special commodities. These tariffs do not require the approval of the board; the only limitation is that the rates must not be higher than the standard tariffs which have been approved, and that they must conform to the provisions of the Railway Act, with regard to discrimination and preference and other matters. The

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CHARLES MILLER,

PRESIDENT.

railway companies are also allowed to make what are called competitive freight tariffs, which, however, must be lower than the standard tariff rates. These tariffs are for traffic between competitive points, and a company may be allowed to violate the long and short haul clause by charging less for a longer distance than for a shorter distance, so as to meet competitive conditions, such as competition by water carriage or by other railways, which do not reach the intermediate points on their line. The railways are allowed to do this because it is thought to be a benefit to them to be allowed to carry, although at less profit, this traffic between competitive points, and because the earnings derived from that source helps them in such a way that they can be reasonably expected to cut down the rates between intermediate points. Then, railway companies may be compelled to make what are called joint tariffs. In the case of two or more railways which form a continuous line between a point on one railway and a point on the other, they may be required to make through rates less than the sum of their local rates on the two lines would be. The board has power to fix the proportion in which the through rate is to be divided between them. Although the board is not required to approve of these special tariffs and commodity tariffs, yet it has a general power of disallowance of all tariffs. It is distinctly provided by the act that all tariffs or portions of tariffs shall be subject to disallowance by the board when the board considers them unreasonable or unjust, or in any way contrary to the provisions of the statute. Thus, there are two grounds and two grounds only on which the board is authorized to interfere. One is that the tariffs cannot conflict with the act. Of course, it is understood these tariffs can be set aside if they do disobey the provisions of the statute. That raises differences of a kind that an ordinary court has to deal with, and questions of fact have to be determined, and questions of law as to the construction of the act. But in the other feature as to the reasonableness of rates other difficulties arise. The act says that if the board considers rates unreasonable or unjust, it can disallow them, and the reasonableness or justness of a rate is a question of fact and not a question of law. The board's findings are by the act made final and binding upon all courts, and the act provides that if the board considers the rates unreasonable or unjust, it can disallow the tariffs. Full control is thus given to the board, and these tariffs are made subject to its discretion. On such a question an appeal from the board may be had to the Governor-in-Council. In the United States they have had a great deal of controversy upon the question of whether railway rates and tolls should be subject to governmental regulation. Tons upon tons of literature have been written on that question, and hours and hours have been devoted to speeches pro and con as to whether such would be in the best interests of the public, and as to whether it was fair to the railway companies that had invested their money, and as some people claim, ought to have the same right to manage their investment as people who have invested in other enterprises have. But these points are settled so far as Canada is concerned, and they have practically always been settled. In the first place, it was always a principle of the English common law that common carriers were bound to carry at reasonable rates, and if an unreasonable rate were extorted the party could afterwards sue in the courts to recover the excess above what was reasonable. It is nothing new, therefore, to subject carriers to some jurisdiction to determine whether freight rates are reasonable or not. Almost from the beginning of railway legislation in the old Province of Canada, long before the incorporation of the Grand Trunk Ry. Co., there was provision that the rates of railway companies should be subject to approval by Government, and not only were they to be subject to approval, but they were subject to revision from time to time. Long before the incorporation of the G.T.R.—and I cite that as being the oldest of our great railway systems—there was such legislation, and the charter of that company embodied it as part of its terms. There is, therefore, no injustice to the railway companies in now making their rates subject to governmental control in this country. Of course, our board is not the Governor-in-Council, but under the old act there was the Railway Committee of the Privy Council, which was given, among other subjects of jurisdiction, that of disputes respecting rates and tolls on railways, and our board is made by statute the direct successor of the Railway Committee of the Privy Council. At one time there was embodied in some of the former railway acts a provision that Parliament might reduce railway tolls, but that such should not be done by Parliament unless for a year previous it could be found that the railway company had had a net income from all sources of 15% upon the capital actually expended upon the construction of the railway. When the C.P.R. charter was passed that amount was reduced from 15% to 10%. There are some provisions in the C.P.R. charter which the company claims prevent our board from exercising full control over the rates, and these provisions may yet lead to some litigation. But with that exception, Canada is likely to be free from that large litigation and agitation that has prevailed in the U.S. over the question of governmental control of railway rates.

As regards this question of the reasonableness of railway rates, we have had cases in which rates on special commodities, or, a special series of rates between different points, or rates of a particular character have been in question, and we have dealt with many of these. But, except when the board allowed the standard tariff originally we have not dealt seriously with the general question as to what the whole system of the rates of a railway company should be, or what it was reasonable to allow them to earn wholly. It is difficult to form any guide for the determination of such a question. The Railway Act affords us no guide whatever. In the U.S. the action of the Interstate Commerce Commission, and of the various state boards, has been largely paralyzed by the litigation upon constitutional questions as to the power of the legislature to give boards authority to reduce tolls beyond the rate which the courts thought would give a reasonable return. In one state, acting on some remarks of judges in the U.S. Supreme Court, they have established a series of rates on this principle: They have had persons to make a valuation of all the railways in the state, to determine as far as they could what it would cost to reproduce these railways, and to say what was fair to allow a reasonable return upon the amount thus ascertained. You can all imagine what would be the enormous task of anybody who assumed to determine what railway rates should prevail in Canada upon a basis of that kind. There are a great many things to be said pro and con on the question of what is a proper basis for determining reasonable rates.

Probably you may think, as I thought in my innocence at one time, that there is some basic principle on which tariffs of railway rates are formed, something that might be taken as a foundation upon which to judge of the reasonableness of rates. However, in one case which we had before us not long ago, we had as a witness a gentleman who had grown old in railway service and had retired to private life. He had passed all of his life dealing with tariffs and tolls, and he was asked in the course of the case on what principles the formation of railway rates was based. And the best answer this gentleman could give was this—he said: When the first man made a railway tariff he had a Chinese puzzle; he did not know what he had to do, but he had to make a tariff and he made one of some kind, and the people who came after him have been acting on it ever since. You can, therefore, judge what are going to be the difficulties of the board when they come to determine, as probably they will have to yet, what shall be the general basis on which railway rates in Canada shall be framed?

There is another question on which many of you would no doubt like to hear something. I refer to the question of car shortage. That question is always with us, but it has been accentuated in the last two years. The business development of Canada has been very great of recent years, and I do not think I am going beyond what my judicial position warrants when I say, that we could hardly expect the railway companies—any more than we could expect others engaged in different businesses—to have been fully supplied with all the cars and all the equipment that would have been necessary to move all the traffic offered during the busy seasons of the last two years. The main question is, whether the railways have gone as far as they ought, and whether they have been prepared for what they reasonably ought to be prepared for? It is upon that principle we think we should deal with the question. It is not our business to compensate people for the past; the act distinctly provides that the remedy of parties who are not furnished with accommodation for the transportation of their goods, is to be had in the courts. But our duty is to look to the future and to see that a proper remedy is applied. We may be asked to apply it quickly or after a time, but you will all see the difficulty we have in getting at the facts in sufficient time to act quickly. We have had a number of cases in which we have been able to afford relief to some extent; we have had other cases in which when the complaints were forwarded to the railway companies, they have acted promptly, and in that way we have been able to render assistance. But the general question has appeared in this way to us: For instance, if a railway company is short of cars and equipment, and some person applies to us to order the railway company to furnish him with cars—well, railway cars and railway locomotives are not on sale every day; the railway company cannot go into the market and buy offhand, and it cannot immediately obey any order we might make in that direction. There would be a fear, of course, that they could only obey our order by taking the cars and equipment from some other places and persons who are equally entitled to them with those who made complaint to the board. That is one difficulty the board experiences, in making an effective order when such an application is made to it. Therefore, we think, except so far as special circumstances would appear to warrant it, that the only course we can adopt is to make enquiry into the question generally, and if we find that railway companies are not reasonably supplied with what is necessary to meet what they ought to meet under the statute, to take some steps to see that they supply themselves in future sufficiently beforehand to accommodate the traffic. If they are given that opportunity and the railways do not avail of it, then more stringent measures might be advisable. With this view we, some months ago, made up our mind that we would ask the chief railway officials to meet the board for the discussion of that and some other questions, and we appointed

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Feb. 5, 1907, to hold such a meeting, so that we might learn something as to what the railways are prepared to do, and which will help us to determine what it would be reasonably possible to require them to do in the future.

It may be interesting to give you a few figures as to the work of the board. The board was in existence for eleven months in 1904, and in that time there were 705 applications to the board. In 1905 there were 1,197, and in 1906, 2,269. You will see the enormous growth of the number of applications, and when I speak of applications I speak of those made to us in formal shape. Apart from these, we receive letters by the hundreds, complaining of certain things, on which we take action as they seem to deserve, and as to which we make enquiry and endeavor to obtain or to effect relief. The following figures show the number of orders made by the board: 1904, 304; 1905, 538; 1906, 1,544. The difference between the number of applications and the number of orders is accounted for by the fact that sometimes, of course, applications are refused, and then there is no order; that very often compromises are made and the matter does not come up for final adjudication; that often the board makes informal decisions which are obeyed without question. In the case of informal applications and complaints by letter, we, in most cases, send them to the railway companies, and often it is found that mistakes have been made and restitution is done by the companies, while in other cases it is found that the companies have acted in accordance with their tariffs. Of course, then it becomes a question as to whether a change ought to be made in the particular tariff, and that has to be considered afterwards.

I wish to say with reference to the future that we have certain rules under which applications to the board are to be made formally, but there are parties who apply to the board and who cannot conveniently serve the proper officers with the necessary notice to bring them before the board. There are also many people who write letters to the board, but who appear to think it something terrible to draw up a formal application even though all they need do in the formal application is to use the language which they use in letters to the board, and serve the notice on the railway companies. It very often occurs that we make copies of these letters and send them to the railway companies and ask for an answer, but that involves delay. If the parties who complain would do this for themselves they would save a great deal of trouble and a great deal of time which is now lost. A large number of our cases are disposed of on the papers without coming to open court, but if parties wish it, they are entitled to have a hearing in open court. However, those who desire a hearing in open court should prepare themselves for that hearing. They should learn something of the facts, and in an important case, employ a lawyer or some one having expert knowledge in railway matters to conduct the case for them. If that were done it would assist the board a great deal. Many people think that the duty of the board is, the moment they hear of a complaint, to ferret out all about it and to give relief. Well, we have not disputed the idea that we may be fairly asked to do that, but I can tell you, that it would involve an enormous amount of labor and take an enormous amount of time to do so. However, if parties do lay a case before us which has been ill-considered, and without the information necessary with regard to it, although we may think that they have not established a case, yet we may still enquire fully into the case afterwards. Of course, if there is an accumulation of such cases, they cannot be taken up at once by the official in charge of them, and considerable loss of time occurs. On the other hand, if the parties would get their cases properly before the board they might immediately ask for a decision. I trust, that from what I have said, you may know a little of the difficulty that faces the Commission in exercising its jurisdiction, and the kind of work it has to do. I trust that these difficulties or some of them will disappear, as the members of the board and the public get better acquainted with the difficulties underlying many of these matters.

There is one thing more I ought to say. I think this country owes a deep debt of gratitude to the first Chief Commissioner of the board, Mr. Blair. He is a very able lawyer; he had much experience as Minister of Railways, and as the head of the Railway Committee of the Privy Council; he took great part in drawing up the Railway Act under which we are working at present, and in order to frame it he must have inquired fully into the different systems in vogue elsewhere. He went to the board with a large amount of knowledge; more than any other man could have had in undertaking such work. He did great work in establishing the Canadian Railway Commission; he established it upon broad lines; I very much regret, and I think the country should regret, that he saw fit to retire so soon from the work of the board. I can only say that it appears to me, from my experience since I have been with the board, that any defects in the system, or in the organization of that board, are almost if not wholly in regard to matters as to which Mr. Blair's ideas were disregarded and overruled, rather than as to those matters with regard to which his ideas were carried out.

March Birthdays.

Many happy returns of the day to

W. G. Annable, General Baggage Agent C.P.R., Montreal, born at Ottawa, Mar. 3, 1875.

P. S. Archibald, C.E., General Manager Elgin and Havelock Ry., Moncton, N.B., born at Truro, N.S., Mar. 21, 1848.

C. N. Armstrong, ex-General Manager Atlantic and Lake Superior Ry., Montreal, born at Maskinonge, Que., Mar. 19, 1850.

D. E. Brown, General Superintendent C.P.R. Trans-Pacific Steamship Service, Vancouver, B.C., born at Owen Sound, Ont., Mar. 20, 1855.

G. J. Bury, Assistant General Manager C.P.R., Winnipeg, born at Montreal, Mar. 6, 1866.

Allan Cameron, General Traffic Agent, C.P.R., for Great Britain and Europe, London, Eng., born near Owen Sound, Ont., Mar. 14, 1864.

F. G. J. Comeau, General Freight Agent Dominion Atlantic Ry., Halifax, N.S., born at Meteghan River, N.S., Mar. 10, 1851.

A. E. Cox, Storekeeper Canadian Northern Ry., Winnipeg, Man., born at Huddersfield, Eng., Mar. 12, 1863.

H. B. Curtis, General Superintendent Newfoundland Express Co., St. John's, Nfld., born at Adrian, Ohio, Mar. 21, 1848.

S. Ennes, Assistant Superintendent G.T.R., Ottawa, Ont., born at St. Louis, Mo., Mar. 19, 1862.

Hon. L. J. Forget, President Montreal Street Ry. Co., born at Terrebonne, Que., Mar. 11, 1853.

C. O. Foss, on survey National Transcontinental Ry. in New Brunswick, born at Wentworth, N.H., Mar. 20, 1852.

H. W. Gays, General Manager Ottawa and New York Ry., Ottawa, Ont., born at Brant, Erie co., N.Y., Mar. 21, 1848.

F. Grundy, Vice-President Quebec Central Ry., Sherbrooke, Que., and President Temiscouata Ry., born at Bury, Lanc., Eng., Mar. 28, 1836.

J. Halstead, Assistant General Freight Agent C.P.R., Calgary, Alta., born at Bracebridge, Ont., Mar. 2, 1877.

R. M. Hannaford, Engineer Permanent Way, Buildings and Bridges, Montreal Street Ry., Montreal, born there, Mar. 22, 1865.

W. Harty, M.P., President Canadian Locomotive Co., Kingston, Ont., born in Biddulph tp., Middlesex, Ont., Mar. 8, 1847.

C. A. Hayes, Assistant General Freight Agent G.T.R., Chicago, Ill., born at West Springfield, Mass., Mar. 10, 1865.

H. S. Heydon, ex-General Agent Canada Atlantic Ry., New York City, born at Newark, N.Y., Mar. 28, 1861.

C. B. Hibbard, General Manager Quebec, Montreal and Southern Ry., Montreal, born at St. John's, Que., Mar. 31, 1858.

J. Hobson, Chief Engineer G.T.R., Montreal, born at Guelph, Ont., Mar., 1834.

T. M. Kirkwood, director Central Ontario Ry., born at Toronto, Mar. 23, 1859.

F. Lee, Division Engineer, C.P.R., Winnipeg, born at Chicago, Ill., Mar. 7, 1873.

R. W. Long, Division Freight Agent G.T.R., Stratford, Ont., born at Appin, Ont., Mar. 20, 1873.

C. E. Lytle, General Superintendent Duluth, South Shore and Atlantic Ry.. Marquette, Mich., born at Newark, Ohio, Mar. 2, 1859.

D. D. Mann, Vice-President, Mackenzie, Mann & Co., Ltd., and 1st Vice-President Canadian Northern Ry. Co., Toronto, born at Acton, Ont., Mar. 23, 1853.

Owen McKay, ex-Chief Engineer, Lake Erie and Detroit River Ry., Walkerville, Ont., born in Ross tp., Renfrew co., Ont., Mar. 13, 1848.

W. C. Orchard, Chief Freight Tariff Bureau, C.P.R., Montreal, born in London, Eng., Mar. 16, 1865.

H. Parry, General Agent Passenger Department, New York Central Rd., Buffalo, N.Y., born at Hamilton, Ont., Mar. 27, 1865.

R. Patterson, Master Mechanic G.T.R., Stratford, Ont., born at Brantford, Ont., Mar. 13, 1860.

E. H. Sewell, City Passenger Agent, C.P.R., Sherbrooke, Que., born at Quebec, Mar. 17, 1875.

J. F. Slocum, Secretary-Treasurer International Ry. Co., Buffalo, N.Y., born at Geneva, N.Y., Mar. 25, 1876.

C. J. Smith, General Manager Richelieu and Ontario Navigation Co., Montreal, born at Hamilton, Ont., Mar. 10, 1862.

G. Sommerville, Agent, Merchants Line Steamers, Toronto, born at Kingston, Ont., Mar. 21, 1855.

W. Y. Soper, director Ottawa Electric Ry. Co., Ottawa, Ont., born at Oldtown, Me., Mar. 9, 1854.

J. N. Sutherland, ex-General Freight Agent C.P.R., St. John, N.B., born at Sydney, N.S., Mar. 17, 1843.

E. J. Travers, Manager British Columbia Car Service Bureau, Nelson, B.C., born at Hamilton, Ont., Mar. 31, 1872.

W. F. Tye, ex-Chief Engineer C.P.R., Montreal, born at Haysville, Ont., Mar. 5, 1861.

G. W. Vaux, Assistant General Passenger and Ticket Agent, G.T.R., Chicago, Ill., born at Montreal, Mar. 21, 1866.

H. Wallis, ex-Chief Mechanical Superintendent G.T.R., Montreal, born at Derby, Eng., Mar. 10, 1844.

D. O. Wood, General Freight Agent for Ontario, Allan Line Steamships, Toronto, born at Kleinburg, Ont., Mar. 16, 1864.

The C.P.R. oil boring outfit has been operating at Bullshead bridge, about five miles east of Medicine Hat, Alta., and has reached a depth of 1,000 ft., where the mud bed, found at Medicine Hat at a depth of 650 ft., was encountered. The company is using the gas in every possible capacity at its shops there, the latest development being the manufacture of engine springs.

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Orders by the Railway Commissioners.

2139. Dec. 6.—Re tariffs of telephone tolls.

2140. Oct. 24.—Directing the G.T.R. to provide protection at Wilson, Norwich, Dundas, and Peel streets, Woodstock, Ont.

2141 to 2254. Nov. 22.—Bell Telephone Co. crossings over various railways.

2255. Dec. 13.—Authorizing the town of Cobourg, Ont., to erect and maintain electric light wires across G.T.R. tracks on William St.

2256 to 2259. Dec. 13.—North American Telegraph Co. crossings over various railways.

2260 to 2268. Dec. 13.—Bell Telephone Co. crossings over various railways.

2269. Dec. 12.—Authorizing the C.P.R. to construct and operate a spur in Okanagan Landing, B.C.

2270. Dec. 12.—Authorizing the C.P.R. to construct a spur to Reid Bros. premises, Elkhorn, Man.

2271. Dec. 12.—Authorizing the village of Clifford, Ont., to lay a gas pipe under G.T.R. tracks.

2272 to 2321. Dec. 13.—Bell Telephone Co. crossings over various railways.

2322. Dec. 12.—Authorizing the G.T.R. to lay a siding across Elgin and Colborne streets to Tait-Carss Lumber Co.'s premises, Barrie, Ont.

2323. Dec. 15.—Authorizing the Montreal St. Ry. Co. to cross the Chateauguay & Northern Ry. tracks at Pius IX Ave., Maisonneuve, Que.,

2324. Dec. 15.—Authorizing the Canadian Northern Ry.'s revised location of its line in Sudbury, Ont. Mileage 117.2 to 118.5 north from Parry Sound.

2325. Dec. 4.—Authorizing the Walkerton and Lucknow Ry. to cross the G.T.R. tracks to the furniture factory in Hanover, Ont.

2326. Nov. 15.—Authorizing the C.P.R. Co. to construct a siding to the James Smart Mfg. Co.'s premises, Brockville, Ont.

2327. Nov. 20.—Authorizing the C.P.R. to dispense with the services of permanent watchman at drawbridge about 1¼ miles from Nomininge station, Quebec.

2328. Dec. 15.—Authorizing the C.P.R. to construct a spur to the Anglo-American Lumber Co.'s premises, Vancouver, B.C.

2329. Dec. 15.—Approving the Canadian Northern Ontario Ry.'s revised location of its line through the tps. of McKim and Neelon, Ont.

2330. Dec. 14.—Authorizing the C.P.R.'s revision of the location of its Lauder Branch in Manitoba.

2331. Dec. 14.—Authorizing the Grand Valley Ry. Co. to open for traffic the portion of its railway extending from the southern limit of Galt, Ont., to its junction with the G., P. & H. Ry.

2332. Dec. 15.—Authorizing the C.P.R. to construct and operate a spur line to the premises of the Rideau Malleable & Foundry Co., Smith's Falls, Ont.

2333. Dec. 18.—Authorizing the G.T.R. to construct a branch line between its main line east of Port Hope viaduct and a point north of Ontario St., Port Hope, Ont.

2334. Dec. 17.—Authorizing the town of Gibson, N.B., to lay a waterpipe under C.P.R. tracks on Neil St.

2335. Nov. 13.—Re forms of contracts of the Canadian and Dominion Express companies.

2336. Dec. 12.—Authorizing the G.T.R. to construct and operate a branch line in Toronto Jct., Ont.; and authorizing the Union Stock Yards, Ltd., and the C.P.R. to construct and operate a branch line from the C.P.R. line in Toronto Junction.

2337 to 2345. Nov. 28.—Bell Telephone Co. crossings over various railways.

2346. Nov. 27.—Authorizing the C.P.R. to build a bridge at mileage 135.96. Chapleau section.

2347. Nov. 27.—Authorizing the C.P.R. to construct bridges at mileage 124.3 and 144.6, Medicine Hat section.

2348. Nov. 27.—Authorizing the C.P.R. to construct a bridge at mileage 50.02, Ignace section.

2349. Nov. 27.—Authorizing the C.P.R. to construct bridges at mileages 106.37, 49.23, and 48.23, Algoma section.

2350. Nov. 28.—Authorizing the Canadian Northern Ontario Ry. to construct a bridge over Irwin Creek, Nipissing, Ont.

2351. Dec. 19.—Authorizing the C.P.R. to construct two bridges on the Molson cut-off, Kenora section, one over Cook's Creek, the other over the east branch thereof.

2352. Dec. 19.—Authorizing the Barrie Gas Co. to lay a waterpipe under G.T.R. tracks.

2353. Dec. 19.—Authorizing the C.P.R. to construct and operate a spur line to the Danville Lumber Co.'s premises, Montreal.

2354. Nov. 16.—Authorizing the C.P.R. to open for traffic a spur in the town of Cote St. Paul, Que.

2355. Dec. 5.—Authorizing the C.P.R. to cross Wickett & Craig's siding and Morse siding to connect with the Davies shipping siding of the Toronto Belt Line Co.

2356. Dec. 19.—Authorizing the C.P.R. to open for traffic its railway, Wolseley-Reston Branch, Sask.

2357. Dec. 17.—Authorizing the C.P.R. to install an interlocking plant where the C.P.R. crosses the G.T.R. in Milton, Ont.

2358. Nov. 16.—Authorizing the Midland Ry. of Manitoba to cross C.P.R. tracks at Clifton Ave. and McPhillips St., Winnipeg.

2359. Nov. 29.—Authorizing the C.P.R. to construct a level crossing over the G.T.R. track leading to Goldie's Mills, Guelph, Ont.

2360. Dec. 17.—Authorizing the Great Northern Ry. Co., U.S.A., to waive notice of a rate of $4.05 net per ton on coal from Coal Creek, B.C., to Helena, Mont.

2361. Dec. 17.—Directing the G.T.R. to construct a farm crossing where its line crosses E. M. Kelly's farm in East Oxford, Ont.

2362. Dec. 26.—Approving the G.T.P. Ry.'s located line in the districts of Portage la Prairie and Winnipeg, Man.

2363. Dec. 20.—Authorizing the Windsor, Essex and Lake Shore Ry. to operate its trains for construction purposes on its line where it crosses the M.C.R. at Talbot St., Essex, Ont.

2364. Dec. 19.—Directing all express companies to furnish to the Board on or before Feb. 1, 1907, copies of their annual, semi-annual or other statements of their affairs and business, etc.

2365. Dec. 18.—Extending the time for filing and approving of all tariffs of tolls of express companies until Mar. 1, 1907.

2366. Dec. 19.—Approving the C.P.R.'s supplement 5 to its standard passenger tariff W no. 38 and cancelling no. 3 and that part of supplement 4 applying between Daysland and Hardisty, Alta.

2367. Dec. 20.—Authorizing the Pembroke Electric Light Co. to erect wires over the C.P.R. tracks 2½ miles east of Pembroke, Ont.

2368. Dec. 19.—Granting application of C.P.R. for order varying order of Aug. 6, 1906, granting leave to the C.P.R. to cross the C.N.R. track at West Ft. William, Ont.

2369. Dec. 26.—Authorizing the G.T.R. to construct a branch line in Southampton, Ont., to the W. C. Williams' flour mill.

2370. Dec. 26.—Authorizing the Montreal Street Ry. to cross the C.P.R. tracks at Papineau Ave., Montreal.

2371. Dec. 26.—Approving the C.P.R.'s supplement 6 to its standard passenger tariff W38, applying between Spence's Bridge at Nicola, B.C., on the basis of 4c. per mile.

2372. Dec. 26.—Approving the C.P.R.'s supplement 2 to its standard freight tariff C.R.C. no. W4.

2373. Dec. 29.—Authorizing the St. Maurice Valley Ry. to open for traffic the portion of its line between Three Rivers and Shawinigan Falls, Que.

2374. Dec. 28.—Extending the time fixed in order 1741 authorizing the Ottawa Electric Ry. to cross by an overhead bridge the Canada Atlantic Ry. tracks on Bell St., Ottawa.

2375. Dec. 28.—Authorizing the Vancouver, Westminster and Yukon Ry. to cross the C.P.R. tracks, and to join with the C.P.R. spur to Fraser River mills at Millside, New Westminster, B.C.

2376. Dec. 28.—Authorizing the C.P.R. to cross the Canadian Northern Ry. spur line to Bird's Hill ballast pit, Man.

2377. Authorizing the Canadian Northern Ontario Ry. to build a bridge over the Wahnapitae River, Ont.

2378, 2379 and 2380. Authorizing the Canadian Northern Quebec Ry. to construct bridges over the St. Anne, Batiscan and Blanche Rivers, Que.

2381. Jan. 3.—Approving the Quebec, Montreal and Southern Ry.'s revised location between St. Gregoire to a junction with the Lotbiniere and Megantic Ry. at St. Philomene, Que.

2382. Jan. 4.—Approving the Vancouver, Victoria and Eastern Ry. and Navigation Co.'s amended location between Cloverdale and east line of sec. 15, tp. 16, New Westminster district, B.C.

2383. Jan. 4.—Authorizing the C.P.R. to construct a branch line to the Sinnot Sand Co.'s premises, Man.

2385. Jan. 4.—Authorizing the Dunnville Gas Development Co. to lay a gas main under the G.T.R. tracks at Forks Road, east of Dunnville Station, Ont.

2386. Jan. 4.—Approving Grand Trunk Pacific Ry. Co.'s by-law, dated Nov. 8, 1906, authorizing the chief executive officer of the company or such other officer as he may from time to time designate to prepare and issue tariffs of tolls.

2387. Jan. 4.—Authorizing the Canadian Northern Ontario Ry. to construct a deviation of the Great North Road, a highway in Parry Sound, Ont.

2388. Jan. 4.—Authorizing the Essex Terminal Ry. Co. to build its line across McDougall St. and Dougall Road in Sandwich East, Ont.

2389. Jan. 4.—Authorizing the St. Maurice Valley Ry. to join its track with the Shawinigan Falls Terminal Ry. tracks in Shawinigan Falls, Que.

2390. Jan. 4.—Authorizing the village of Dublin, Ont., to lay a gas pipe under the G.T.R. tracks

2391. Jan. 4.—Authorizing the C.P.R. to build a branch line on the Lac du Bonnet Branch, Man., to the Inter-West Peat Fuel Co.'s premises.

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2392. Jan. 7.—Authorizing the C.P.R. to build a bridge at Shepherd Lake, Toronto-Sudbury branch.

2393. Jan. 7.—Authorizing the town of Tillsonburg to carry a water main under G.T.R. tracks.

2394. Jan. 7.—Approving the North American Telegraph Co.'s by-law, authorizing the General Manager and Secretary, or such other officer as may at any time be designated, to prepare and issue tariffs of tolls.

2395. Jan. 7.—Approving the Bell Telephone Co.'s by-law authorizing C. F. Sise, Jr., General Superintendent, or such other officer as he may designate, to prepare and issue tariffs of tolls.

2396, 2397, 2398 and 2399. Authorizing the Midland Ry. of Manitoba to operate its trains over the crossings of the Canadian Northern Ry. tracks at Carman and Roland, and over the C.P.R. tracks at Plum Coulee and Elm Creek, Man.

2400. Jan. 7.—Approving the Michigan Central Rd.'s interlocking plant at La Salette, Ont., at the crossing of the G.T.R., and authorizing it to operate its trains over the crossing.

2401. Nov. 29.—Complaint of I. Hansler, of Allanburgh, Ont., that cattle pass erected by the N., St. C. & T. Ry. under the railway on his farm is unsuitable.

2402. Dec. 10.—Approving the Canadian Northern Ontario Ry.'s shipping bill, form 64.

2403. Jan. 8.—Bell Telephone Co. crossing C.P.R. and public crossing one mile north-east of St. Martin Jct., Que.

2404. Nov. 29.—Directing the Guelph and Goderich Ry. to provide an undercrossing under its tracks on J. Barr's farm, Blyth, Ont.

2405. Dec. 12.—Authorizing the G.T.R. to construct a branch line to the Pommer & Cowan Furniture Mfg. Co.'s premises, Berlin, Ont.

2406. Jan. 10.—Petition of residents and ratepayers of Rossport, Ont., to authorize the C.P.R. to open McKay and Boon Sts.

2407. Jan. 10.—Authorizing the Harrietsville Telephone Association, Ont., to erect poles and wires across G.T.R. tracks east of Dorchester station, Ont.

2408. Jan. 10.—Authorizing the C.P.R. to construct a diversion of its line at Emery, Ont.

2409. Jan. 10.—Authorizing the Canadian Northern Quebec Ry. to place its tracks across the C.P.R. tracks in Deschambault parish, Que.

2410. Jan. 10.—Authorizing the C.P.R. to construct a branch line to J. A. Jamieson's premises, Grattan, Ont.

2411. Nov. 29.—Directing that reports of any person appointed by the Board to inquire into any accident be privileged, and shall only be made public or given out upon application therefor by order of the Board.

2412. Jan. 9.—Authorizing the C.P.R. to build a bridge across the Seguin River, Ont.

2413. Dec. 1.—Authorizing the C.P.R. to cross the Guelph Radial Ry.

2414. Jan. 9.—Amending a certificate granted by the Deputy Minister of Railways and Canals respecting additional lands acquired by the B.C. Southern Ry. along its route.

2415. Nov. 29.—Directing the C.P.R. to construct and maintain a farm crossing for D. McOuat, Staynerville, Que.

2416. Jan. 8.—Approving the Vancouver, Victoria and Eastern Ry. and Navigation Co.'s located line between Fraser River bridge and the junction with the Victoria Terminal Ry. at Oliver's, B.C.

2417. Jan. 10.—Authorizing the city of Hamilton, Ont., to lay a gas main under G.T.R. tracks on Ferguson Ave. and Barton St.

2418. Jan. 10.—Authorizing the Consumers Gas Co., Toronto, to lay a main under the G.T.R. tracks at crossing of Eastern Ave.

2419. Jan. 9.—Authorizing the G.T.R. to construct sidings and spurs therefrom across streets in Toronto for the accommodation of industries in the vicinity of Thackeray and Dickens streets and Carlaw Ave.

2420. Jan. 11.—Approving the Vancouver, Westminster and Yukon Ry.'s location of the fifth section of its line from station 1671+10 to station 3306+52, being the north boundary of North Vancouver to the Cheakamus River, B.C.

2421. Jan. 11.—Authorizing the Toronto Ry. Co. to operate its east track crossing the C.P.R. tracks on Avenue Road, Toronto.

2422. Jan. 7.—Authorizing the C.P.R. to give a rate of 17 cents per 100 lbs. on 1,000 lbs. of wool in grease from Montreal to Peterboro, said shipment having been originally made from Lethbridge, Alta., to Montreal, and refused.

2423. Jan. 9.—Approving the Canadian Northern Ry.'s standard passenger tariff C.R.C. 186, applying on the Ridgeville section, Man.

2424. Jan. 9.—Authorizing the Canadian Northern Ry. to charge 3½c. per mile per passenger between stations on the Q., L.L. & S. Ry. & S. Co.'s line Regina to Prince Albert, Sask.

2425. Jan. 9.—Approving the Canadian Northern Ry.'s supplement 1 to standard passenger tariff C.R.C. 190, applying a rate of 3½c. between stations on the Stony Plains section and Morinville branch, Alta.

2426 to 2452. Dec. 27.—Bell Telephone Co. crossings over various railways.

2453 and 2454. Jan. 14.—Authorizing the Canadian Northern Ontario Ry. to construct two bridges over the Vermillion River.

2455. Jan. 14.—Authorizing the town of Dunnville, Ont., to lay a water pipe under G.T.R. tracks.

2456. Jan. 14.—Approving the Preston and Berlin St. Ry.'s place and mode of crossing by its railway of the G.T.R. spur line from its main line in Waterloo, Ont., and crossing Wilmot St. and the switches leading from the spur in Berlin, Ont.

2457. Nov. 29.—Authorizing the town of Owen Sound to lay a sewer pipe under G.T.R. tracks.

2458, 2459, 2460, 2461 and 2462. Jan. 18.—Approving Grand Trunk Pacific Ry.'s plans of located lines shown on plan, and profile filed under case 64, file 2236, also between mileage 14 and 17 west of Yellowhead Pass, B.C., from mileage 0 to mileage 84.3 in Alberta, from mileage 32.3 west to mileage 0 in Alberta, and from mileage 0 east to mileage 35 in Alberta, and from mileage 0 west to mileage 14 in British Columbia.

2463. Jan. 18.—Approving the Quebec, New Brunswick and Nova Scotia Ry.'s revised location through the county of Champlain, Que.

2464. Dec. 19.—Directing the G.T.R. to provide better protection on Simcoe St., Cedardale, Ont.

2465. Jan. 18.—Authorizing the C.P.R. to construct a branch line to J. Y. Griffin & Co.'s premises, West Fort William, Ont.

2466. Jan. 18.—Authorizing the Vancouver, Victoria and Eastern Ry. and Navigation Co. to construct a branch line from its main line to Victoria shaft, Phœnix, B.C.

2467. Jan. 18.—Authorizing the township of Grey, Ont., to carry a drain across the right of way and under the G.T.R. tracks.

2468. Jan. 18.—Authorizing J. H. Hager to lay a gas pipe under G.T.R. tracks at Hagersville, Ont.

2469. Jan. 18.—Approving the Niagara, St. Catharines and Toronto Ry. Co.'s location of its line from the Welland Canal, tp. of Grantham, to Virgil, Ont.

Summaries of orders issued since the foregoing are given on a later page of this issue.

G.T.R. Passenger Rates.

The stated case for the opinion of the superior courts, as to the jurisdiction of the Toronto Police Magistrate, in the recent proceedings in which C. M. Hays, Second Vice-President and General Manager G.T.R., was charged with failing to carry third-class passengers for a penny a mile, and to provide at least one train a day having in it third-class carriages throughout the entire length of the line, as required by sec. 3, chap. 37, 16 Vic., has been approved by the parties, and will come on for argument at an early date. The information was laid by W. N. Robertson, Toronto, a newspaper reporter, who said in the evidence given, Dec. 1, that he made attempts to get a third-class ticket at the G.T.R. ticket office at the Union Station, Oct. 17, and offered the rate of 2c. a mile to the conductors on all trains going east that day, but was obliged to pay 2½c. a mile until he got off either at Riverdale, York or Scarboro' stations; and also that he failed to find any third-class carriages. Evidence was also given by J. D. McDonald, District Passenger Agent, G.T.R., Toronto, who stated that the company had no penny rate between Toronto and Montreal, except to Montreal itself, as a regular thing, but often had special excursions at a low rate; the company did not have any cars labelled third class. The Police Magistrate entered a conviction, finding as facts that the G.T.R., of which Mr. Hays was the responsible head in Canada, had not at any time during 1906 fixed or issued a tariff of fares or charges payable by each third-class passenger; that the company had not permitted a third-class passenger to travel on its line at the fare or charge of one penny currency for each mile travelled, and that at least one train a day having in it third-class carriages had not been run between Toronto and Kingston, Ont., being part of the G.T.R. line. W. Nesbitt, who represented Mr. Hays, objected to the jurisdiction of the court on the ground that as a special penalty is provided by sec. 294 of the Railway Act, 1903, sec. 138 of the Criminal Code does not apply. The case sets out that the conviction having been questioned on the ground that it is without jurisdiction, and is erroneous in point of law, the question is asked whether upon the facts as found the conviction is right. If the court finds it has been made without jurisdiction and is erroneous, it will be quashed, otherwise it will stand, and the court will proceed to determine the penalty, the case having been adjourned indefinitely to enable the point to be argued.

The case has been argued and the Court of Appeal has reserved judgment. On Feb. 6, W. N. Robertson moved in Toronto before Justice Teetzel, for a peremptory writ of mandamus directing the G.T.R. to run a train daily and to issue tickets in accordance with the terms of the act of incorporation, but the application was refused.

The Dominion Government is being asked by various persons interested to suspend the operations of the Alien Labor Act in the spring in view of the demands of railway construction.

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Railway Location Surveys

H. D. Lumsden, Chief Engineer National Transcontinental Ry. Commission, in his recent address as retiring President of the Canadian Society of Civil Engineers, gave some interesting particulars of the surveys for that line. He said: "The assumed distance between Moncton and Winnipeg was 1,890 miles, and this was divided into six districts, averaging, say, 315 miles each. A district engineer was appointed to each district as the work progressed, and the control of the survey parties in each was directly with such district engineer. In District A, New Brunswick; District B, Eastern Quebec, and the prairie or westerly portion, or about 65 miles of District F, being comparatively easily accessible, the parties on preliminary surveys consisted of an engineer-in-charge, transitman, leveller, topographer, two rodmen, two chainmen, picketman, five axemen, and a cook. When location was commenced these parties were supplemented by the addition of a draughtsman and one or two axemen.

"The country from the St. Maurice River westerly to within, say, 100 miles of Winnipeg, on the route laid down to be explored, was one of which little was known outside of explorations made by the Geological Survey up various streams, which almost all ran at right angles to the general course of our line, and one or two survey lines in Northern Ontario and Manitoba. The survey parties employed in the unknown districts were considerably larger, having in addition to the members before mentioned, five or eight men as axemen and packers, who were continuously employed in bringing in to their parties provisions from the nearest caches or depots. Previous to our commencing work the Grand Trunk Pacific Ry. Co. had put a number of parties in the field between Winnipeg and North Bay, and made a preliminary survey of a greater portion of the route, and in the winter of 1904-05 we took over from them all the plans, profiles and information they had obtained of that portion of the country, and made use of them where practicable, also taking over what provisions they had on hand in that district. During the winter of 1904-05 we had in all 11 parties making preliminary surveys in New Brunswick, 11 parties between New Brunswick and the Quebec boundary and Weymontachene on the St. Maurice River, or Clear Lake, eight parties between the last mentioned points and the boundary between Ontario and Quebec and two parties, one south and one north of Lake Abitibi. In Jan., 1905, one preliminary and five exploration parties were sent out in District F, between the northwest angle of Lake Nepigon and the Manitoba boundary, to make a thorough examination of the country, with a view of shortening and improving the line previously run by the G.T.P. Co. At the end of Mar., 1905, we had 38 parties, and by the middle of the summer, 45 parties in the field, of which about one-half were in inacessible districts, necessitating the transport of supplies for their maintenance for distances up to say 200 miles from the nearest available transport routes. Owing to the heavy snow and lack of much knowledge of the possible routes to reach the various parties, great difficulty was experienced during the first winter in keeping parties fully supplied, but since then, by better knowledge of the country and the cutting of a few winter roads to the principal distributing points or depots, and pack trails thence to caches on or near our line, or to points to which transport by water in the summer is good, we have now little trouble, and not one-third the expense in keeping parties fully supplied, and maintaining at least a bi-monthly communication with all of them.

"Printed books of instructions to engineers were issued early in 1905, in which were set out the duties of various classes of engineers, transitmen, levellers, topographers, field-draughtsmen, etc., and giving general instructions as to the plotting of plans, profiles, etc. They also contained memoranda of necessary camp outfit and supplies, medicine chests, stationery boxes, etc., for 18 men for 200 days. These were modified according to the circumstances under which parties were working. Supplementary instructions were also issued from time to time in regard to the engagement and paying off of men, the making up of pay-rolls, expense accounts, the precautions necessary to prevent forest fires, and copies of the regulations in force in each province for that purpose, also instructions and precautions to be taken by men in charge of canoes. During the summer the numerous waterways were practically the only routes available, and with the exception of a few pointers or lumbermen's boats, canoes were the only means of transport. This necessitated a large amount of manual labor, packing outfits and provisions over the numerous portages, varying in length from a few yards to several miles. Great difficulty was found in procuring a sufficient number of men suitable for this service, as only those who had previous experience in this sort of work were at first of much use for the arduous labor of packing. Numbers of men, thinking because they had been frequently in canoes they were quite competent to take part in such work, soon found that canoeing for pleasure was a different matter from this, and that the carrying of numerous loads of 100 lbs. or more, on their backs, over even a portage a quarter of a mile in length, was more than they could stand, while men such as half-breeds and Indians, who had been brought up to such work, would with ease carry double the load the novice could do, and keep at it all day. The principal canoes used for this purpose were made of basswood, but a few cedar and canvas canoes were also employed. They varied in length from 16 ft., which were used for light work and the carrying of mail, to 22 ft., the latter being of extra beam and depth, and capable of carrying over a ton of provisions, together with the necessary crew. During the summer of 1905 we were exceptionally unfortunate, and the accidents to parties in canoes were numerous, causing the loss of a number of valuable lives.

"Our experience has been that by far the most economical means of transport, outside of rail or steamer, is by horses and sleighs where practicable, and the cutting of a few miles of winter road connecting or following large bodies of water, has been the means of saving thousands of dollars. The provisions also were delivered in much better condition, rainy or very hot weather, leaky canoes and carelessness of men contributing largely to the depreciation of the value of many kinds of goods while in transit by canoes. The distribution by teams beyond certain distances was found to be impracticable, owing to the fact that either all fodder had to be brought in at great expense, or no lakes and streams were available, and the amount of provisions required was not sufficient to warrant the cutting of sleigh roads for the entire distance. To overcome this difficulty we have been making use of a number of men, dogs and toboggans with very satisfactory results, distributing from our main caches, or stores, to smaller ones in the vicinity of our line, say 10 or 20 miles apart. Few people who have never had the actual experience with the use of dogs as a means of transport can form any idea of their capabilities, and the ease with which they seem to do their work, provided the men in charge take proper care of them and see that they are regularly fed and sheltered on cold or stormy nights. A team of dogs may consist of any number from two to six, or even more, but in a rough timbered country from three to five is the most one man can conveniently handle. The dogs used by us were all, with a few exceptions, bought in the towns and villages, and as long as they were of sufficient size, and not too young or too old, they were acceptable. Very few days are required to break in a team of dogs, especially if one broken dog can be found for a leader. A man and five dogs will, in a moderately rough timbered country, move 500 lbs. six to eight miles a day and return for another load. In a level country, with a good trail, they can make 10 to 12 miles a day and return. Where lakes and rivers are available, and there is good going, 30 to 50 miles a day have been frequently covered by dogs with a light load. For freighting purposes every dog's load can be considered as 100 lbs. The drivers of dogs should be active, hardy and of good temper, and all that is necessary for a dog trail is that several men go over it with snowshoes, cutting out all brush and logs for a width of say 2 ft., avoiding as far as possible all sharp turns or steep hills. The more such a trail is travelled over the better it becomes, especially where in a timbered country it is protected from drifting snow. The toboggans used are about 8 ft. long and 14 ins. wide, preferably made from split-out strips of birch, maple or ash half an inch thick. Each toboggan is provided with a canvas cover in which all goods are securely covered and lashed to the toboggan with cod-line, or light rope, a light rope being also attached to the rear end of the toboggan for the driver to hold on to, and enable him to hold back when going down hill. Regular leather harness is provided for dogs, the only precaution necessary being to see that the collars fit each individual dog and do not gall the shoulders or neck

"Having personally had considerable experience on the location of railways, I may state that, in my opinion, when surveys are to be conducted in a country which is timbered and little known, it is in the long run a great saving in time and money if it is practicable to have the engineer who is to have charge of the survey, accompanied by a good assistant and say half a dozen or more men, go over the country as best he can, running rough compass lines, using a micrometer, pacing or estimating for distances, taking barometrical altitudes, and generally becoming acquainted with the nature of the country and the principal difficulties he may expect to have to overcome. Having gone over the whole of the section allotted to him, and thoroughly explored the country for several miles on either side of his rough compass line, he will have naturally formed some idea of the best route to be followed, and save the cost of a large party running instrumental lines that may prove after weeks of hard labor utterly impracticable through running into some unforeseen obstacle. The engineer in charge of work of this character should be one who has had considerable experience in a timbered country, able to find his way anywhere and not afraid of being lost. He should be able to establish his latitude and approximate longitude by observation, though owing to the difficulty in carrying a reliable chronometer the latter is seldom to be relied upon. On reaching his point of departure, his aneroid barometers, of which he should have at least two, or better, four, having all been previously compared and rated, he will assume a datum for elevation for his work, and all altitudes should be reduced to that datum. By arranging the movements of his party he can provide that one barometer will always be stationary, and if a half-hourly record of its readings is carefully kept all altitudes taken by the party in the field can be reduced to one datum, the party having kept record of the time at which the observations were

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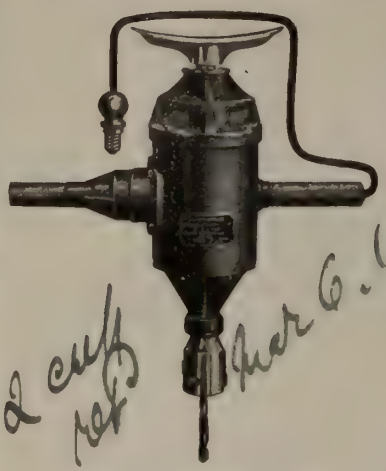

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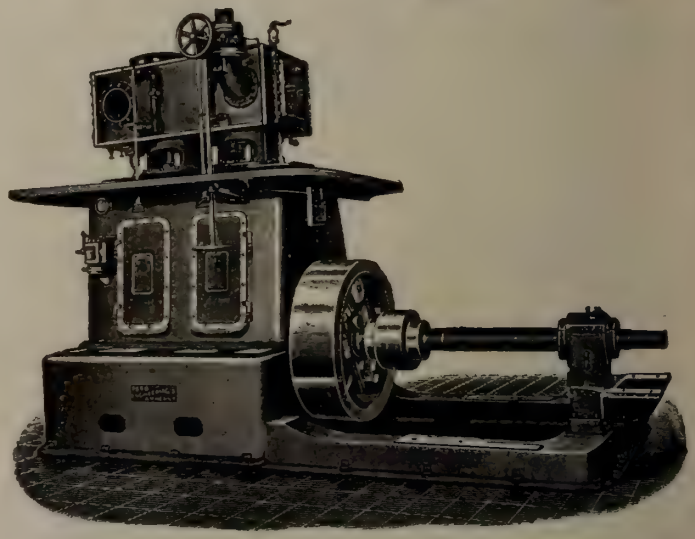

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355 Carlton Street, Winnipeg; J. F. Porter, Manager.

made As it is well known; such barometrical altitudes cannot be explicitly relied upon, but with care and good barometers it is surprising what close approximation to the true altitudes can be obtained My experience has been that the aneroid barometers best suited for rough work are those about 2½ ins. in diameter, divided to read 5 ft. The range of such barometer does not generally exceed 2,800 ft., but they are much less liable to get out of order than the larger ones, which are supposed to read by verniers to one foot.

"Having thoroughly explored the country through which he is to operate, the engineer in charge selects a route for his preliminary line, and having been joined by his transitman and the rest of his party, he proceeds with the running of such a line. If the country is rough and broken a transit should be used, but if tolerably level a picket line, run by the aid of field glasses, the angles being turned with a transit or box sextant, is generally the more rapid method, and sufficiently accurate for preliminary purposes if the line is checked by compass bearings. The chainage should be done with a light steel chain. Having assumed a datum for elevation, the levelling should in all cases be carefully done and checked wherever practicable, bench marks being established at least every half-mile. Cross-sections should be taken by the topographer as frequently as the nature of the country may require, to enable him to show contour lines for every 5 ft. of elevation on either side of the line for considerable distances. As the through levels are not in any way affected by the cross-section work, these sections can be taken with sufficient accuracy with a good hand level, the distances right or left being measured with a chain or tape. It is a good practice to insist that the field notes of all instrument men be plotted up by the men who made them each night as the work progresses; this will save time and avoid many errors. Having completed his preliminary line the engineer in charge lays down on his plan, with the aid of contour lines, a proposed location, and proceeds to stake it on the ground, the levels being checked with those of the preliminary line, and bench marks established every 1,000 ft. Having completed his first location and made any revisions that may have occurred to him, the engineer who has been in charge of such work should be moved on to other work and a new man put in charge for final location. This new man should, before taking charge of the party, be furnished with the plans and the profiles, and given ample time to go over the lines run by his predecessor. He may or may not be able to improve on the previous line, but in any case the judgment of two in place of one is obtained on final location.

"The commissariat for a survey party today is a very different matter from what it was thirty years ago. Formerly, if a party was well supplied with the necessaries of life, in the shape of bacon, beans, flour, tea, and sugar, it was all that they expected, whereas to-day the addition of canned meats, dried fruits, vegetables and canned goods generally, has added much to the variety of food supplied; but the one thing that in the old days contributed more than others to the well-being and comfort of a party is still the same, namely, a good cook."

The Russel-Chambers Co. has been incorporated under the Dominion Companies' Acts, with a capital of $500,000 and offices at Toronto, to carry on a general contracting business, and in connection therewith to construct, charter and operate steam and other vessels. The provisional directors are: W. B. Russel, C.E., Toronto; W. C. Chambers, railway contractor, Harriston, Ont.; S. Johnston and R. H. Parmenter, Toronto.

Canadian Freight Classification.

The Canadian Freight Association is applying to the Board of Railway Commissioners for approval of supplement 8 to Canadian Freight classification 12, and supplement 7 thereto. The following changes are proposed:

PRESENT.	L.C.L.	C.L	PROPOSED.	L.C.L.	C.L
Page 40. Furniture:			Furniture:		
Wardrobes, K. D. flat		2	Bureaus, wardrobes, washstands, dressing cases, sideboards—when entirely taken apart and K. D. flat, boxed		2
Page 14.					
Agricultural implements:			Agricultural implements:		
Rollers, lawn or garden			Erase "Rollers, lawn or garden, (wood, iron or steel)"—See hardware, page 7 of this supplement.		
Wood		1			
Iron or steel		2			
C.L., Minimum 20,000 lbs		6			
			Hardware:		
			Rollers (hand), lawn or garden,		
			Wood	1	5
			Iron and steel	2	5
Page 79. Ore:			Ore:		
Mica, or crude mica, value not to exceed $100 per ton, and to be so limited by written release	4	7	Mica, or crude mica (untrimmed) value not to exceed $100 per ton, and to be so limited by written release	4	7
Page 85. Rubber:			Rubber:		
Belting, hose and packing	2	4	Belting and hose.	2	4
			Packing, in boxes..	2	4

Railway Equipment and Service.

The following memorandum over the signature of the Chief Railway Commissioner, A. C. Killam, has been sent to railway companies under the jurisdiction of the Board:

"The Board, both recently and at the end of 1905, received many complaints of insufficiency of the supply of rolling stock and other equipment upon railways, and of delays in the transportation and delivery of traffic. The Board has made some inquiries into these matters, and it has reason to believe that some railway companies have not been supplied with rolling stock and other equipment necessary for enabling them, without delay, to receive, carry and deliver traffic; and have failed to carry and deliver with due diligence. The Board also fears that railway companies have not fully realized their responsibilities in these respects, and have not made the efforts which they might and should have made to give proper and efficient service. The Board realizes that circumstances beyond the control of railway officials, and an unprecedented development of traffic, which was not and could not reasonably have been foreseen, have contributed to make the situation worse than it would otherwise have been.

"The Railway Act requires companies, according to their respective powers, to furnish adequate and suitable accommodation for the receiving, loading, carrying, unloading and delivering of all traffic offered for carriage upon their railways; and, without delay and with due care and diligence, to receive, carry and deliver all such traffic; and to furnish and use all proper appliances, accommodation and means necessary for these purposes The Board desires to receive from railway companies information as to the extent to which they have complied with these provisions of the statute; to what extent they have failed to do so; and to what circumstances they attribute, and on what grounds they excuse, any such failure. The Board desires, also, to be informed as to the steps which railway companies are taking to provide themselves with the equipment necessary to fulfil the requirements of the statute; whether these steps will, in the opinion of the responsible officials of the respective companies, enable them fully to comply with the requirements of the statute in the future; and, if not, on what grounds they excuse themselves for not taking such steps as appear necessary for the purpose. Also, whether such officials have reason to believe that the traffic upon their respective railways, during the next ensuing year, will be greater, less, or equal to that of the year last preceding, and on what grounds they base their belief in these respects. The Board does not intend to accept this information absolutely, but to make it the subject of further inquiry. The Board thinks that it will be in the interests of the railway companies, as well as of the public, that full and frank answers be given by the companies on the points named by the Board.

"The Board has hitherto felt a difficulty in making orders for the supply of cars or other equipment, upon specific complaints, for fear that this might result in taking from others of the public facilities to which they were equally entitled with the complainants. The Board has also felt that the unprecedented activity of business could not have been fully foreseen by the officials of railway companies; and that it could not reasonably adopt a policy which would have penalized railway companies for failure to have the necessary equipment, or to be fully prepared to handle traffic with due expedition. But the Board thinks that the circumstances of the last two years should serve as a warning; and that measures which would not have been just and reasonable under previously existing circumstances may be so in the future, especially after companies have been fully notified of the views which the Board takes.

"The Board is also of opinion that the making of large expenditures in improvements of railways, and especially in building new lines of railway, furnishes evidence of the powers of railway companies, in respect of financial requirements, to supply all necessary rolling stock and equipment; and the Board will also feel obliged to consider carefully whether railway companies which are extending their lines, and thereby rendering necessary a further supply of men, rolling stock, and equipment, are justified in doing so without fully equipping the lines which they are already operating. The Board does not desire to hold railway companies to a higher standard than seems to it reasonable; but it proposes in the future to adopt all means within its power to make railway companies live up to a reasonable standard and to give to the public, so far as circumstances render it reasonably possible, the service which the statute requires.

"The Board would also like from each railway company a full statement respecting the rolling stock, equipment of various descriptions, showing, among other things: The number of cars of different kinds, such as box, flat, etc.; also the different capacities of same. The number of locomotives of different kinds, such as road, switching, etc.; also different capacities of same. Other kinds of rolling stock of different kinds. The numbers of each of such different kinds and capacities added in 1906. The numbers of each of such different kinds and capacities permanently disabled, used up, or abandoned during the year. The numbers of cars, locomotives, etc., of the various kinds available for use during 1906. The numbers of new ones of each of such different kinds and capacities now contracted for, and the times when these are expected to be received. The numbers of freight cars supplied by railway companies to branch lines not owned but operated or controlled by them and other independent roads known to have limited supplies of their own, and to what extent trunk lines have thereby reduced their own transportation capacities. The numbers of locomotives leased or let to any such lines, and whether, or to what extent, companies

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have thus reduced their carrying power. Also a statement whether companies possess terminal facilities sufficient for loading and unloading cars and delivering traffic with expedition, and the extent to which such facilities are defective."

In connection with the foregoing the following Ottawa correspondence of Feb. 16 was published in the Toronto Globe: "Since Nov. 23, 1906, 46 complaints about shortage of cars have been made to the Board—nine against the G.T.R., 11 against the C.P.R., seven against the Canadian Northern, seven against the G.T.R. and C.P.R., one against the Canadian Northern and C.P.R., one against the Bay of Quinte, one against the Michigan Central, one against the Great Northern, and eight general, aimed chiefly against the Canadian Northern, C.P.R. and G.T.R. The Board has given prompt attention to all these complaints—in many cases with satisfactory results—and to the extent of its power has urged and pressed the companies to strain every nerve and use every available resource to meet the demands of shippers at all points, and especially the urgent need for the delivery of coal and wood at stations all over the western Provinces.

"In reference to the attacks which have been made upon the Board by some opposition journals, it should be borne in mind that the wording of the statute regarding the supply of cars and motive power is: 'The company shall, according to its powers, furnish adequate and suitable accommodation for receiving and loading all traffic offered, and shall without delay, and with due care and diligence, receive, carry and deliver, etc.' The Board has been investigating as fully as possible the question as to the powers of the different companies, and when the leading and most reliable officials testify upon oath, under the most searching cross-examination, that they cannot get cars and locomotives made fast enough to handle the traffic of the country—that the car and locomotive shops of the Dominion, including their own, though taxed to the limit of their capacity, are unable to fill the companies' orders with anything like reasonable promptness; that the companies are enlarging and extending their own shops as fast as possible, and, in fact, are in every way exerting themselves to the utmost limits of their powers—when such statements are made on oath (and an examination of the books does not as yet warrant any denial of the allegations), it is not an easy matter for the Board or any other body of men to solve the problem of car shortage equitably and as quickly as the suffering public and some representatives of the press demand.

"From the investigation it seems that many of the terminals of the leading companies are inadequate, and that the shortage of motive power is relatively greater than the shortage of cars."

The Canadian Transfer Co.'s officers and directors for the current year as elected recently, are: President, Lieut.-Col. F. C. Henshaw; General Manager and Secretary, F. M. McRobie; other directors: H. Paton, C. Cassils, G. R. Starke, Sir H. Montagu Allan.

The Eastern Construction Co. has been incorporated under the Dominion Companies' Acts for the purpose of carrying on the construction of railways, canals, telegraph and telephone lines, bridges, wharves, piers, docks, elevators, warehouses, etc.; supplying material for the same, and acquiring and dealing in the stock and bonds of railway and other companies for which construction work may be done. The capital is fixed at $1,000,000, and the offices are at Ottawa. The provisional directors are: Jas. Gillespie, H. H. Short, F. H. Honeywell, S. B. Johnsone, J. B. Prendegrast, Ottawa.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,000	325,100	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	138,800−
	$3,916,100	$2,598,500	$1,317,600	$ 327,700+

Approximate earnings for Jan., $351,400, against $359,900 for Jan., 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,396,156.74	$2,371,811.08	$734,033.42+
Aug.	6 170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122 94	98,188.05−
Dec.	5,992,098.07	3,726,503.73	2,265,594.34	80,588.97−
	$37,464,474.07	$22,878,607.37	$14,585,866.70	$2,398,467.60+

Approximate earnings for Jan., $4,173,000, against 4,409,000 for Jan., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Dec., $254,418.32; net earnings, $74,325.03, against $253.792.42 gross and $93,323.94 net for Dec., 1905. Net earnings for six months ended Dec. 31, $574,603.48 against $573,268.88 for same period, 1905. Approximate earnings for Jan., $233,089, against $235,863 for Jan., 1906.

MINERAL RANGE RY.—Approximate earnings for Jan. $53,146, against $61,303 for Jan., 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Dec., $920,497.79; net earnings, $350,329.49 against $914,689.43 gross and $444,589.74 net for Dec., 1905. Net earnings for six months ended Dec. 31, $3,374,903.13, against $3,451,749.04, for same period 1905. Approximate earnings for Jan., $615,176, against $847,263 for Jan., 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

Subject to audit, the accounts for the half-year ended Dec. 31, 1906, show the following results:

Gross receipts		£3,585,000
Working expenses		2,561,400
Net receipts		£1,023 600
Net revenue charges for the half-year, less credits		481 500
Balance		£ 542 100
Deduct Canada Atlantic Ry. deficiency for half-year	£34,200	
Less Detroit, Grand Haven & Milwaukee surplus for the half-year	15,600	18,600
Surplus		£523,500

This surplus added to the balance of £16,000 from June, 1906, makes a total of £539.500 available for dividend, which will admit of the payment of the dividends for the half-year on the 4% guaranteed stock and first and second preference stocks, and a dividend of 3% for the year on the third preference stock, leaving a balance of about £13,200 to be carried forward.

The accounts of the G.T. Western Co. for the half-year show a surplus of £17,200 which is carried forward to the current half-year.

Approximate earnings for Jan., $3,240,854, against $2,896,439 for Jan., 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to Jan. 31.

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£517.228	£460,451	£56,777	....
Canada Atlantic	25,749	24.294	1,455	...
G. T. Western	92,512	85,253	7,259	....
D. G. H. & M.	30,440	25,161	5,279	....
Total.....	£665,929	£595,159	£70.770	....

The Royal Coal Co. has been incorporated under the New Brunswick Companies' Act for the purpose of acquiring and developing coal and other mines in the province, and in connection therewith to construct and operate railways or tramways to be operated by steam or electricity; to own and operate steam and other vessels, and to construct wharves, docks, canals, etc. The capital is fixed at $100,000, and the offices are at Moncton, N.B. The provisional directors are: H. VonHagen, J. M. Seely, New York; I. Purdy, Purdy Station, N.Y.; L. V. Blum, Boston, Mass.; M. F. Keith, Moncton, N.B.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska and Yukon Ry.—The Railway Committee of the House of Commons has approved of the bill incorporating a company with this title, for the purpose of constructing a railway from near where the International boundary crosses the Klihmi River near Pleasant Camp, B.C., north-westerly along the Klihini, Tatsenshini, Shakwak, and Alsek River valleys, along Kluane Lake, and the valleys of the Donjek and White rivers, by the most feasible route to the International boundary between Yukon and Alaska, between the 62nd and 64th parallels of latitude. The provisional directors are: G. A. McDougall, J. R. Smith, Dawson, Yukon; F. Goslin, Fairbanks, Alaska; C. E. Winn-Johnston and B. L. Allan, Ottawa.

The Algoma Central and Hudson Bay Ry. Co. is applying at the current session of the Dominion Parliament for an act extending the time for the commencement and completion of the line from the main line of the C.P.R. to James Bay and branches. (Jan., pg. 1).

British America Pulp, Paper and Ry. Co.—Application is being made at the current session of the Dominion Parliament for an act extending the time for the completion of the railway and branch lines authorized by sec. 10, chap. 89, 1900, and for the extension of the same to Montreal towards the south, and to the mouth of the Saguenay river towards the east. It is also desired to have power to operate the railway by steam or electricity. Brosseau and Holt, Montreal, are solicitors for the applicants.

Collingwood Southern Ry.—The Dominion Parliament is being asked at its current session to incorporate a company with this title to construct a railway from Collingwood southerly to near Baxter on the Sudbury branch of the C.P.R., and from at or near Collingwood southerly and easterly to the C.P.R. at or near Orillia, Ont. Power is also sought to acquire and operate steam and other vessels, to construct or lease wharves, elevators or other structures; to acquire and utilize steam, electric or other power, and dispose of the same. It is asked that the undertaking be declared to be for the general advantage of Canada. G. Moberly is solicitor for the applicants.

Crow's Nest Pass Coal Co.—The car repair shops of the company at Coal Creek, B.C., were destroyed by a snowslide, Feb. 10.

Detroit River Tunnel—The Board of Railway Commissioners will be asked Mar. 27 to sanction an agreement signed Dec. 19, 1906, leasing to the Michigan Central Rd. the undertaking, rights, powers, works and property of the Detroit River Tunnel Co. (Feb., pg. 87).

Great Northern Ry. in Canada.—J. J. Hill is reported as saying that a large force of men is working on the company's extensions in Canada, principally at the western end, although only the roughest kind of work is possible, but construction will be pushed vigorously in the spring. The line is already practically done from Vancouver through the Rocky Mountains. It will be pushed across the prairies of Alberta, Saskatchewan and Manitoba to Winnipeg, which will be the eastern terminus. The new line will be about 1,500 miles long, and should be finished within the next two years. The Wall Street Journal in connection with this construction says: "This new transcontinental road will be owned by the Great Northern. Its importance to the Hill system could hardly be over-estimated. It will be directly competitive to the C.P.R. from Winnipeg to Vancouver and is retalia-

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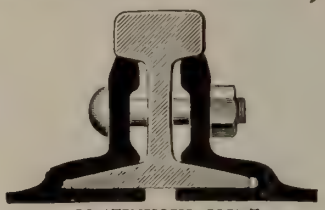

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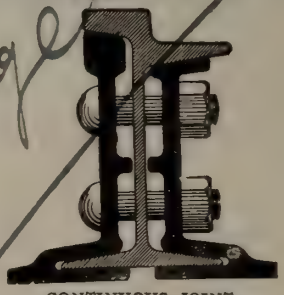

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tion on a gigantic scale for the temerity with which the C.P.R. built down to Spokane. It is interesting to know in connection with this Hill-Canadian Pacific fight that if a new line is built from Fargo to Minot it will very closely parallel the "Soo" line (a C.P.R. line) almost its entire length. It will be possible to throw freight from the Hill lines in Washington, Montana and even North Dakota across into Canada and through to the east on the Canadian route, or it will be possible to route freight from the rapidly developing Canadian territories through into the U.S. for the American route. There are no state legislatures or any interstate commerce commissions in Canada."

Hudson Bay.—It is reported from Winnipeg that the Manitoba Government has decided to make an appeal to the electors upon the question of financing the construction of a railway from Winnipeg to Hudson Bay.

Senator Ferguson had an opportunity of bringing forward the question of such a railway in the Senate Feb. 7. He pointed out its importance in connection with the sea route to Europe, and said the terminus of such a railway would be Fort Churchill, a harbor which was open from June to Nov. each year.

Hudson's Bay and Western Ry.—Application is being made at the current session of the Dominion Parliament for an act extending the time for the commencement and completion of the projected lines of railway, decreasing the amount of capital stock, and authorizing the company to enter into agreements for various purposes with other railway companies.

Intercolonial Ry.—The last group of buildings at Moncton, N.B., for the new I.C.R. shops, for which a contract has been let to E. A. Walberg, comprise the following: machine shop, 176 ft. by 405 ft., having the entire main floor area covered with 10-ton electric cranes; boiler shop, 52 ft. wide and 375 ft. long, the floor being covered with 10-ton electric crane; boiler erecting shop, 52 ft. wide by 375 ft. long, the floor being covered with a 35-ton electric crane; engine erecting shop, 83 ft. wide and 375 ft. long, covered with two 60-ton electric cranes; smith shop, 77 ft. wide and 375 ft. long, covered with jib cranes; the riveting tower, 25 ft. by 50 ft. and 62 ft. to base of rail, and 72 ft. clear height is at one end of the boiler erecting shop. The frame work of all the buildings will be of structural steel, the walls and roof covering will be of reinforced concrete. The lighting will be both from windows and a large number of skylights.

Tenders are under consideration for the erection of several buildings at Halifax, N.S., and a station building at Sackville, N.B.

Plans are reported to have been prepared for the erection of a new station building at Amherst, N.S., adjoining the present building.

Junction Terminal Ry.—The Ontario Legislature is being asked at its current session to pass an act incorporating a company with this title to construct a railway to be operated by steam, electricity or other motive power from the Union Stock yards, Toronto Junction, to other points within the municipality of Toronto Junction, and to make connections with all railways operating within the municipality. Johnston, McKay, Dods and Grant, Toronto, are solicitors for the applicants.

Kettle Valley Lines.—Construction is in progress on the line from Grand Forks to the mining camps at Franklin, B.C., about 50 miles. When this extension is completed it is reported that the company will undertake the construction of an extension from the southern terminus at Republic, Wash., to Spokane, Wash. (Aug., 1906, pg. 455.)

Magdalen River Valley Ry.—The Quebec Legislature is being asked at its current session to incorporate a company with this title to construct a railway from Cap a l'Ours, along the valley of the Magdalen River, to connect with the interior section of the Atlantic, Quebec and Western Ry. Martineau, Lemieux and Brassard, Quebec, are solicitors for the applicants.

Malone and Hopkins Point Ry.—The Board of Railroad Commissioners have issued a certificate of necessity to the Malone, Fort Covington and Hopkins Point Ry., to construct a railway from Malone to Hopkins Point, Franklin County, N.Y., 16 miles. The report from Albany, N.Y., stated that it was proposed to have the line extended to Dundee, Que. (Jan., pg. 3.)

Manitoulin and North Shore Ry.—The Dominion Parliament is being asked at its current session for an act extending the time for the commencement and completion of the projected lines of railway. (Jan., pg. 3.)

Minudie Coal and Ry. Co.—An arrangement is being discussed for the extension of this company's railway from River Hebert across the mouth of the river, through Amherst Point to Amherst, N.S. The projected extension will give Amherst a deep water frontage on Cumberland Basin, and will bring the trade of a considerable mining and farming district to the town. (Sept., 1906, pg. 529.)

Ottawa Terminal Ry.—Application is being made at the current session of the Dominion Parliament for an act incorporating a company with this or such other title, as may finally be determined upon, to acquire all lands necessary or desirable for the undertaking, to construct and operate lines of railway and sidings, to create and issue bonds and other securities, to enter into agreements with railway and other companies or persons, and particularly to take over the rights of the Canada Atlantic Ry. in the lands of the Rideau Canal reserve, obtained from the Government for the purpose of erecting a central station in Ottawa; and authorizing the G.T.R. and the Canada Atlantic Ry. to subscribe for and acquire stock, and to guarantee the bonds of the company, the undertaking of which is declared to be for the general advantage of Canada. (See G.T.R. Betterments, Feb., pg. 101.)

Owen Sound and Meaford Ry.—Application is being made to the Government for approval of the proposed crossings and structures in connection with this projected railway between Owen Sound and Meaford, Ont., plans for which have been deposited in the Registry office at Owen Sound, Ont. (Aug., 1906, pg. 455).

Quebec Bridge and Ry. Co.—Satisfactory progress was made on the erection of the cantilever bridge over the St. Lawrence River during the past working season. The south anchor arm was completed and the south cantilever arm as well. The anchor arm now swings clear of the false work, five bents of which have been removed. A total lineal progress of 762½ ft. was made during the year, including four 50-ft. panels of the anchor arm, the main posts and the entire cantilever arm, 562½ ft. long. The erection has been carried on with a traveller built of steel and enveloping the trusses. It is 54 ft. long, 105 ft. wide, and 220 ft. high, with 70-ft. top and bottom extensions, and fully rigged weighs 1,120 tons. The illustration on this page shows the progress made at the south end of the bridge up to Dec. 31, 1906.

THE QUEBEC BRIDGE AT DEC. 31, 1906.

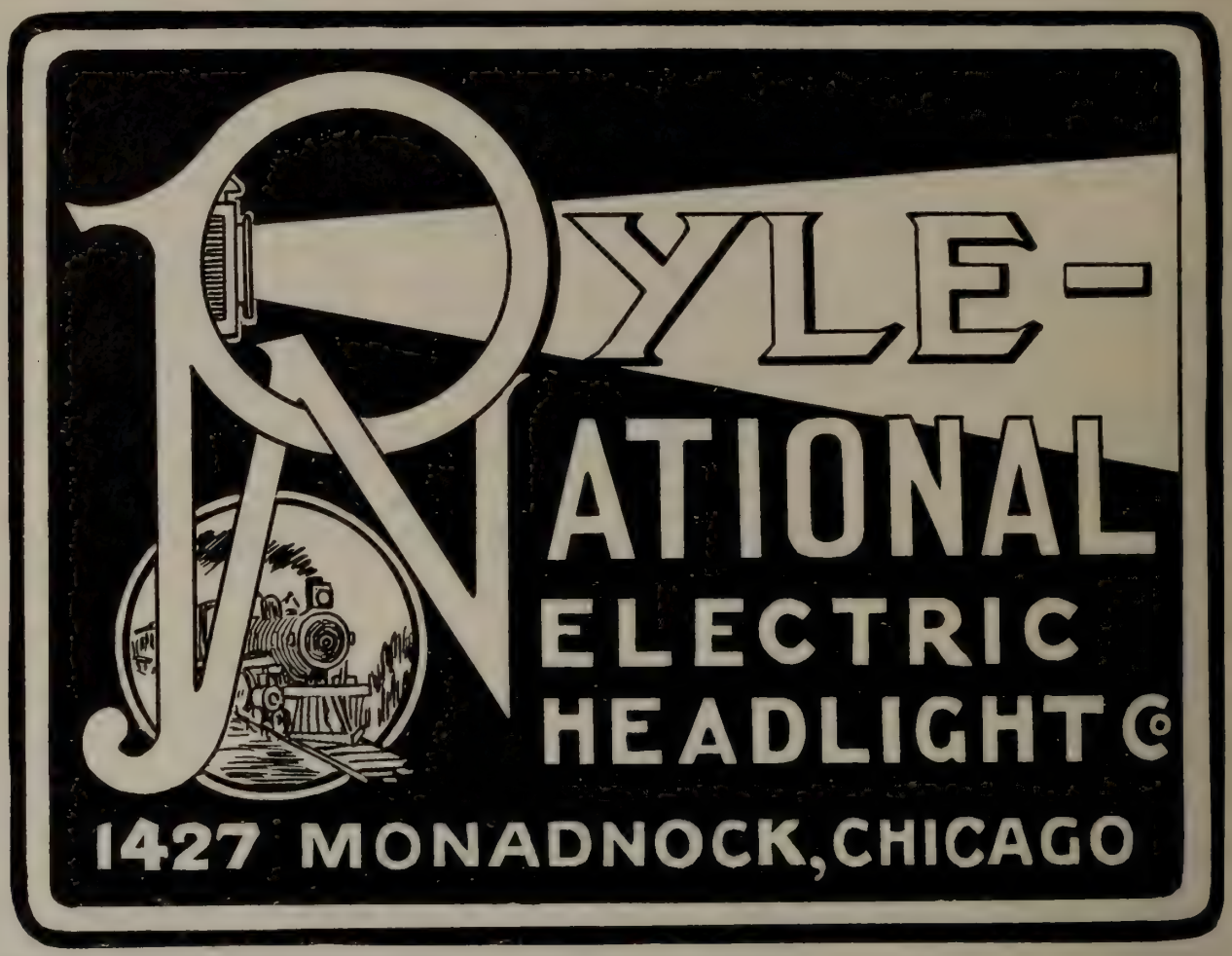
Quebec Central Ry.—The Quebec Government has been asked to provide aid by means of land grants for the construction of the branch from Scott's Junction to the Quebec Bridge, and for the extension from Beauce Jct. to St. George, Que.

Quebec, Montreal and Southern Ry.—Reports from New York state that the Delaware and Hudson Co., which owns the Q.M. and S. Ry., has completed arrangements for financing the entire amount required for the construction of the extensions to the Quebec Bridge. It is expected that the contract for the additional 42 miles from the end of the line at present under contract to the bridge, will be let at an early date.

Quebec and Lake Champlain Ry.—The Quebec Legislature is being asked at its current session for an act incorporating a company with this title for the purpose of constructing "and working a railway between these two points." J. C. Langelier, Quebec, is solicitor for the applicants. (Feb., pg. 89.)

Sault Ste. Marie to C.P.R. Main Line.—A deputation from Sault Ste. Marie, Ont., waited on the Ontario Government, Feb. 13, and urged amongst other things that the Government construct, or aid in the construction of a railway from Sault Ste. Marie northerly to the C.P.R. main line, about 200 miles. Consideration was promised.

The Algoma Central and Hudson Bay Ry. is in operation for some 70 miles, is partially constructed for a considerable further distance, and surveys have been completed to a junction with the C.P.R. Provincial bonuses towards the construction of this line have been voted. Another line is the Bruce Mines and Algoma Ry., which extends from Lake Huron, through Bruce Mines village to the Rock Lake copper mines, and has been given power to extend to the C.P.R. The deputation did not expect that either of these lines were likely to engage in the construction of an extension to the C.P.R., and therefore asked for a Government line if possible.



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St. Mary's River Bridge Co.—Application is being made at the current session of the Dominion Parliament for an act authorizing the company to use its bridge for the passage of steam railway trains. (Aug., 1906, pg. 455.)

St. Mary's and Western Ontario Ry.—Tenders were received to Feb. 23, for the construction of the section of this projected railway between St. Mary's and Embro, Ont. The work to be done includes clearing the right of way, fencing, grading, bridging, ballasting, tracklaying, and the erection of telegraph lines complete and ready for operation. The rails, fastenings, ties and telegraph supplies will be provided by the company and delivered at specified points.

Sudbury-Cobalt Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title to construct and operate a railway from Sudbury to Cobalt, Ont. Clary & Buchanan, Sudbury, are solicitors for the applicants.

Temiskaming and Northern Ontario Ry.—The chairman of the commission recently stated that negotiations were in progress with the G.T.R. which, if successful, would enable the commission to run trains through from North Bay to Toronto. It is expected at an early date to open a further mileage for traffic. Tenders have been asked for the grading of the line from the termination of the present contract to a junction with the G.T. Pacific Ry. near Lake Abitibi. Supplies are being got in for the construction of the branch to Charlton Lake, the contractors for which are the Canadian Construction Co. The tenders which were received for the construction of an office building at North Bay, Ont., were considered too high, and new tenders have been called for.

We have been advised that surveys have not been made for the branch lines proposed to connect the Larder Lake and Portage Bay districts with the main line. (Feb., pg. 89.)

Thessalon and Northern Ry.—The Ontario Legislature is being asked at its current session to incorporate a company with this title for the purpose of constructing a railway from Thessalon Station on the Algoma branch of the C.P.R., south-easterly to Thessalon, thence north-easterly to the Mississaugua River, in the township of Gould. Hearst, McKay and Darling are solicitors for the applicants.

Toronto Eastern Entrance.—The City Board of Control has approved of the expenditure of $12,000 towards the cost of surveys, etc., in connection with the entrance of the railways into Toronto from the east. A meeting of representatives of municipalities outside Toronto interested in the matter was held at Bowmanville, Feb. 7, when a resolution was passed expressing an opinion in favor of a route common to all railways from Port Union to Toronto, along the base of Scarboro bluffs, and favoring a conference of all interested with a view to an agreement being reached.

Toronto Elevated Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title with power to construct and operate an elevated railway in Toronto, East Toronto, North Toronto, Toronto Junction and the township of York. R. F. Segsworth, Toronto, is solicitor for the applicants.

Toronto Union Station.—The City Board of Control has decided to provide $12,000 in the estimates for the current year for the purpose of providing special engineers' reports, etc., in connection with the projected Union Station.

Tusket Wedge Ry.—Application is being made at the current session of the Nova Scotia Legislature for an act incorporating a company with this title for the purpose of constructing a railway from Yarmouth, or Butterwell's Crossing on the Halifax and South-Western Ry. through Yarmouth and Argyle tps., to Tusket Wedge, N.S., with all necessary powers. The applicants are H. T. LeBlanc, F. L. Porthier, J. R. LeBlanc, A. A. Porthier, Yarmouth, N.S.

White River Valley.—Surveys are being made with a view of constructing a railway through the White River Valley, Yukon, the party being in charge of Capt. J. J. Healy. It was stated in Dawson that the preliminary surveys will start at Stewart City, and follow the White River to Ladue Creek, and along that creek to the International boundary. The line is projected as part of the big railway line, which it is proposed to construct to connect the Trans-Siberian Ry. with the lines of the American continent. See Alaska and Yukon Ry.

Winnipeg City Power Plant.—In connection with the construction of the electrical power development plant near Lac Du Bonnet, Man., by the Winnipeg City Council, tenders are being considered for the construction of a tramway 24 miles long. The tramway will extend from Lac Du Bonnet station to Point du Bois; it will be of standard gauge, 2% gradients. The specifications provide for construction of the ordinary railway type, the track being laid with 50 or 60-lb. steel rails. The line will be operated by steam, and will be used for freight purposes, and the carrying of workmen to and from the site of the power works. It is merely a means of approach for the construction of the hydro-electric power plant at Point du Bois, and is being built of necessity, owing to the very large machinery parts which will require to be transported, and which will, in many cases, take the whole capacity of a car. The machinery at the plant will be of the 3,000 k.w. type. The plant will be of 60,000 h.p. capacity, and the part to be constructed immediately is estimated to cost $3,000,000. C. B. Smith is Chief Engineer.

Winnipeg and North-Western Ry.—Application is being made at the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Winnipeg northerly between Lakes Winnipeg and Manitoba, to and along the Carrot River valley, thence westerly by way of Fort la Corne or near thereto, along the north side of the North Saskatchewan River to the Lobstick River, with a branch from near Saddle Lake to Lake la Biclie; from Prince Albert to Battleford, Sask., and from near Victoria, southerly to Edmonton, and northerly to Athabasca Landing, Alta. A. T. Drummond, Toronto, is solicitor for the applicants.

Yonge St. Bridge, Toronto.—Application is being made at the current session of the Dominion Parliament by the city of Toronto, for an act enabling the city, or the city and the G.T.R. and the C.P.R., jointly, or either of them, to construct a bridge across the railway tracks at the foot of Yonge St., pending the decision of the litigation between the parties as to the bridge, and providing for the payment of the cost thereof. (Jan., pg. 7.)

Yukon Central Ry.—Application is being made at the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from the northern boundary of B.C. to Dawson City, by way of the Yukon River valley, or by the most feasible route, as an alternative proposition; to operate steam and other vessels, car ferries, telephone and telegraph lines, and all other necessary powers. The notice is signed by H. Blitz and L. Auerbach, Boston, Mass.

Railway Rolling Stock Notes.

The Intercolonial Ry. has received five consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont.

The Canadian Northern Ry. has ordered a 70 ft. combined cafe and day car to be built in the U.S. for delivery in the summer.

The Canada Foundry Co., Toronto, has, since Jan. 1, delivered two 10-wheel locomotives and one switching locomotive to the Canadian Northern Ry.

The Locomotive and Machine Co. of Montreal delivered to the C.P.R. during Jan. 10 locomotives, 22½ by 28 in. cylinders, fitted with the Vaughan-Horsey system of superheating.

The Canadian Northern Ry. received between Jan. 14 and Feb. 12 two first-class day coaches and three mail and express cars from the Crossen Car Manufacturing Co., Cobourg, Ont.

The Manitoba Legislature has added a clause to the Canadian Northern Ry. Co.'s Act., giving the Provincial Railway Commissioner power to order the company to increase its rolling stock from time to time in keeping with the public requirements

The Shawinigan Falls Terminal Ry., operating the railways at Shawinigan Falls, Que., which connect the St. Maurice Valley Ry. and the Canadian Northern Quebec Ry., has placed an order with the Canadian General Electric Co. for a 600 h.p. electric locomotive.

The C.P.R. between Jan. 15 and Feb. 12 placed orders at its Angus, Montreal, shops, for the following rolling stock, etc.: one sleeping car, one dining car, one first-class car, one tourist car, two colonist cars, one baggage and express car, 50 box cars, 33 flat cars, six stock cars, and two pile-drivers.

The C.P.R. between Jan. 15 and Feb. 12 received the following rolling stock: 13 locomotives from the Locomotive and Machine Co. of Montreal; 22 steel ore cars from the Dominion Steel Car Co., Montreal; eight locomotives, three dining cars, two first-class cars and 495 box cars from its Angus, Montreal, shops.

The Canadian Northern Ry. received the following rolling stock between Jan. 15 and Feb. 15: two 1st class cars, 3 mail and express cars from Crossen Car Manufacturing Co., Cobourg Ont.; 15 box cars from Rhodes, Curry & Co., Amherst, N.S.; 4 locomotives and 2 switching locomotives from Canada Foundry Co., Toronto.

The Intercolonial Ry. has received since Dec. 17, 1906, 35 Hart convertible dump cars ordered from the Dominion Dump Car Co., and built by Rhodes, Curry & Co., Amherst N.S.; nine consolidation freight locomotives from the Canadian Locomotive Co.; 58 box cars, 60,000 lbs. capacity, and one snow plough from Rhodes, Curry & Co.

The difficulty which railway companies have in obtaining rolling stock is evidenced from the fact that the capacity of practically all the plants is being taxed to supply orders on hand, and the car and other companies cannot guarantee early delivery. A British locomotive firm recently offered to take a contract from the C.P.R. for 1908 delivery.

The Temiskaming and Northern Ontario Ry. Commission has ordered 100 steel underframe flat cars, 36 ft. 10 ins. over buffers, and 100,000 lbs. capacity, from the Dominion Car and Foundry Co., Montreal. An order has also been placed for 100 wooden flat cars, 36 ft. 9¾ ins. over end sills, and 60,000 capacity, for April and May delivery.

The order for 35 locomotives placed by the C.P.R. with the Locomotive and Machine Co. of Montreal, as mentioned in our

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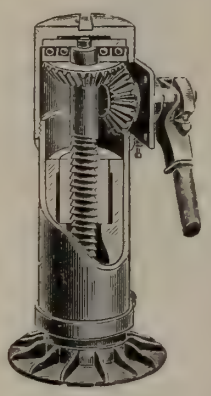
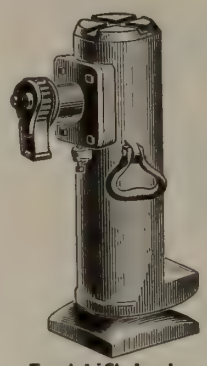


Sectional View



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last issue, was forwarded to the company during the summer of 1906, but did not actually take effect until the end of Dec. The locomotives are standard 10-wheel passenger engines, and standard consolidation engines, duplicates of those recently constructed. Delivery will run from June to Sept.

The 128 box cars which the C.P.R. is having built at its Angus, Montreal, shops, will be of standard dimensions and will have the following special equipment: Simplex body and truck bolsters, Simplex brake beams, Westinghouse air brakes, McCord journal boxes, Susemihl roller side bearings, Tower malleable couplers with solid steel knuckles, all steel diamond pattern trucks, Barber roller, Simplex. The 89 flat cars, which are also being built at the Angus shops, will be similarly equipped.

Following are dimensions of the 15 10-wheel locomotives which the Canadian Northern Ry is having built by the Canada Foundry Co., Toronto: Cylinders, 20 x 26 in.; driving wheels, 63 in. diameter; boiler, 62 by 71⅞ in. diameter, 200 lbs. working pressure; firebox, 109⅞ in. long, 42½ in. wide; tubes, 240 or 264 of 2 in. diameter and 14 ft. long; wheel base—driving, 15 ft. 3 in.; engine 23 ft. 3½ in.; engine and tender, 52 ft. 7 in. Weight in working order, 300,000 lbs.; driving, 131,000 lbs.; engine, 161,000; tender, 133,000.

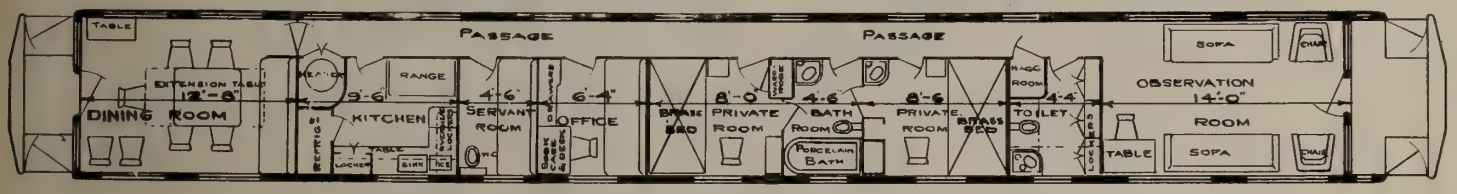
Following are the dimensions of the 25 consolidation engines for which the Canadian Northern Ry. has placed an order with the Canada Foundry, Toronto: Weight in working order—leading, 19,000 lbs.; driving, 150,000 lbs.; engine, 169,000 lbs.; tender, 133,000 lbs.; wheel base—driving, 15 ft. 3 in.; engine, 23 ft. 3½ in.; engine and tender, 52 ft. 7 in.; cylinders, 21 by 26 in., driving wheels, 57 in. diameter; boiler, 62 by 71⅞ in.; 200 lbs. pressure; firebox, 109⅞ in. long by 42½ in. wide; tubes, 240 or 264 of 2 in. diameter and 14 ft. in length.

The 15 mail and express cars which the C.P.R. is having built at its Angus, Montreal, shops, will be 60 ft. long over frame; and the body and under frame will be of wood. The specifications also provide: axles, 5 by 9 in.; bolsters, double; brake beams, Simplex with adjustable head; brake shoes, cast iron; brakes, Westinghouse air, high speed; brasses, 5 by 9 in.; couplers, Tower passenger; heating system, Gold with Frumveller heater; springs, 34 in. quadruple elliptic; trucks, 4-wheel passenger; wheels, 36¼ in. steel tried, no vestibules.

The specifications for the 25 first-class cars, without smoking rooms, for which the C.P.R. has placed an order at its Angus, Montreal, shops, show a seating capacity of 82, the general dimensions being: length, 72 ft. over frame; width, 9 ft. 10½ in. over frame. The springs are 38 in. quadruple elliptic; the trucks, 4-wheel passenger, and the wheels 36¼ in. steel tired; axles, 5 by 9 in.; journal boxes and brasses, 5 by 9 in.; bolsters, double; brake beams, Simplex with adjustable heads; brakes, Westinghouse high speed; heating, Gold with Frumveller heater; couplers, Tower passenger.

The C.P.R. is having built at its Angus shops 30 stock cars having the following general dimensions: length, 36 ft. 8 in.; width, 9 ft. 5 in. over frame; width, inside, 8 ft. 9¾ in.; height, inside, 7 ft. 1¼ in. The specifications provide for: body and underframe, wood; axles, 4¼ by 8 in.; bolsters, Simplex with Susemihl side bearings; brake beams, Simplex; brake shoes, cast iron; brakes, Westinghouse air; journal bearings, 4¼ by 8 in.; couplers, Tower malleable, with solid steel knuckles; journal boxes, McCord; roofs, double board; trucks, all steel diamond pattern; wheels, 53 in. cast iron.

The Saskatchewan Government recently asked the Department of Railways for a loan of locomotives and cars from the Intercolonial Ry., to relieve the shortage on the railways in that Province. The Minister of Railways replying Feb. 8, said owing to lack of motive power and cars on the I.C.R. he regretted that none were available for sending to the west. There were, it was stated, about 1,000 cars on the tracks which could not be moved owing to scarcity of locomotives, and some 18,000 carloads of freight that could not be shipped owing to lack of cars. The Intercolonial Ry., like all other lines, could not get new cars fast enough to keep pace with the growing traffic.



FLOOR PLAN OF SIR THOMAS G. SHAUGHNESSY'S PRIVATE CAR KILLARNEY.

(For description see January issue, page 7.)

The Central Ontario Ry. has ordered two locomotives from the Canadian Locomotive Co., Kingston, Ont. Following are general specifications:

TYPE.—Ten-wheel, 4-6-0.
WEIGHT.—In working order, on drivers, 95,000 lbs.; total, 120,000 lbs.
WHEEL BASE.—Rigid, 10 ft. 11 in.; total, 21 ft. 3½ in.; engine and tender, 46 ft. 11½ in.; length over all, engine and tender, 55 ft. 10¼ in.
HEATING SURFACE.—Firebox, 133.7 sq. ft.; tubes, 1,235 sq. ft.; total, 1,368.7 sq. ft.
WHEELS.—Diameter of drivers, 57 in.; centres, cast steel.
CYLINDERS.—Diameter, 18 in.; stroke, 24 in.
BOILER.—Type, extension wagon top; working pressure, 190 lbs.
TUBES.—Number, 202; diameter, 2 in.; length, 12 ft.
BRAKES.—Westinghouse.
TENDER.—Weight when loaded, 100,000 lbs.; capacity, 4,500 imp. galls. water, six tons coal. Style of tank, U shape; wheels, 33 in. steel tired; journal, 5 by 9 in.; brake beam, Simplex.

Following are the principal dimensions, etc., of the 20 locomotives, class G 2, which the C.P.R. is having built at its Angus, Montreal, shops:

TYPE.—4-6-2. Simple superheater.
WEIGHT.—On drivers, 139,300 lbs.; total, 214,300 lbs.
CYLINDERS.—Diameter, 21 in.; stroke, 28 in.
WHEELS.—Drivers, diameter, 69 in.; tyres, Krupp crucible; engine truck wheel and tender wheel tires, open hearth; centres, cast steel.
BOILER.—Type, radial stayed; working steam pressure, 200 lbs.
HEATING SURFACE.—Tubes, 2,777 sq. ft.; firebox, 180 sq. ft.; total, 2,957 sq. ft.
TUBES.—Number, 190 of 2¼ in.; 24 of 5 in.; material, C.P.R. special; length, 19 ft. 6 in. over sheets.
FIREBOX.—Length, 94⅛ in.; width, 69⅞ in.; material C.P.R. special. Grate area, 45.6 sq. ft.
TANK CAPACITY.—Water, 5,000 Imperial galls.; coal, 10 tons.
SPECIAL FITTINGS.—Westinghouse air brake and straight air brake; axles, Steel, Peech & Tozer; brake beam, Simplex; brake shoe, C.P.R. standard; headlight, Pyle National Electric; journal bearings, C.P.R. standard; superheater, Vaughan and Horsey.

Following are some of the principal general dimensions, etc., of the 25 freight locomotives which the C.P.R. is having built in the United States:

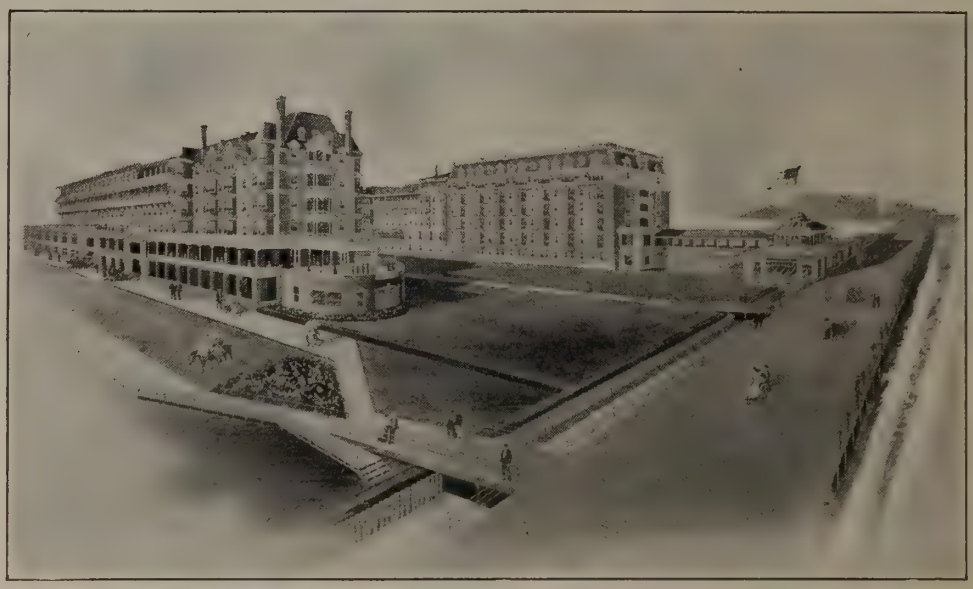
CLASS.—10-38-E.-3165-3189.
CYLINDER.—Diameter, 22½ in.; stroke, 28 in.
BOILER.—Type, wagon; material, steel; diameter, 69 in., inside front ring; thickness of sheets, 11/16, ¾ and 25/32 in.; working pressure, 175 lbs.; staying, radial.
FIREBOX.—Material, steel; length, 95¼ in.; width, 64⅝ in.; depth, 77⅝ in. (front), and 64⅝ in. (back); thickness of sheets—sides, 5/16 in.; back, ⅜ in.; crown, ⅜ in.; tubes, ½ in. water space—front, 5 in.; sides, 4½ in.; back, 3½ in.
TUBES.—Material, iron; wire gauge, 11; number, 236; diameter, 2 in.; length, 14 ft. 2½ in.
WHEELS.—Driving, 58 in.; driving wheel centres, 51 in.; journals—main, 9½ by 12 in.; others, 9 by 12 in. Engine truck wheels, 31 in.; journals, 6 by 11 in.
WHEEL BASE.—Driving and rigid, 15 ft. 10 in.; total engine, 24 ft. 4½ in.; total engine and tender, 53 ft. 9½ in.
WEIGHT.—On driving wheels, 165,000 lbs.; on truck, 23,000 lbs.; total engine, 188,000 lbs.; total engine and tender, 309,000 lbs. These figures are estimated.
TANK CAPACITY.—Water, 5,000 Imperial gallons; coal, 10 tons.
TENDER.—Wheels, 8; diameter, 33 in.; journals, 5½ by 10 in.
SUPERHEATER.—Superheater tubes, number, 24; diameter, 5 in.

Following are the principal dimensions, etc., of the 25 freight locomotives which the C.P.R. is having built at the American Locomotive Co.'s Richmond works, for delivery in March, April and May:

CYLINDER.—Type, piston valve; diameter, 22½ in.; stroke, 28 in.
WHEEL BASE.—Driving, 14 ft. 10 in.; rigid, 14 ft. 10 in.; total, 26 ft. 1 in.; total, engine and tender, 54 ft. 6 in.
WEIGHT.—In working order, 190,000 lbs.; on drivers, 142,000 lbs.; engine and tender, 316,000 lbs.
HEATING SURFACE.—Tubes, 2,237 sq. ft.; firebox, 179 sq. ft.; total, 2,416 sq. ft.; grate area, 49.49 sq. ft.
AXLES.—Driving journals, 9¼ by 12 in.; engine truck journals, 6 by 10 in.; tender truck journals, 5½ by 10 in.
BOILER.—Type, extended wagon top; outside diameter first ring, 70⅜ in.; working pressure, 175 lbs.
FIREBOX.—Type, wide; length, 102⅛ in.; width, 70⅜ in.; thickness of crown, ⅜ in.; tube, ½ in.; sides, 5-16 in.; back, ⅜ in.; water space—front, 5 in.; sides, 4½ in.; back, 3½ in.; crown, staying, radial.
TUBES.—Number, 240; diameter, 2 in.; length, 14 ft. 4 in.; gauge, 11, L.W.G.
SUPERHEATER.—Type, C.P.R. standard; tubes, 24 of 5 in. for superheater, and 96 superheater tubes, 1¼ in.
BOXES.—Cast steel.
BRAKE.—Driver, Westinghouse American combination; tender, Westinghouse.
AIR SIGNAL.—Westinghouse J.
ENGINE TRUCK.—Four-wheel centre bearing.
GRATE.—Style, cast iron rocking type.
TENDER.—Frame, channel; C.P.R. standard; tank, C.P.R. latest design, semi-water bottom; capacity, 5,000 gals. water, 10 tons coal.
VALVES.—Piston, 11 in. diameter; travel, 6 in.; steam lap, ⅞ in.; ex. clearance ⅛ in.
WHEELS.—Drivers, 63 in. diameter, 56 in. centers; engine truck, 31 in.; tender, 34 in.; material, cast steel.

The Manitoulin and North Shore Ry. has received a locomotive from the Locomotive and Machine Co. of Montreal, of which the principal dimensions, etc., are:

CYLINDER.—Type, simple slide; diameter, 20 in.; stroke, 26 in.
TRACTIVE POWER.—Pounds, 28,410.
WHEEL BASE.—Driving and rigid, 14 ft.; total, 21 ft. 7 in.; engine and tender, 49 ft. 5¾ in.
WEIGHT.—In working order, 146,150 lbs.; on drivers, 124,550 lbs.; engine and tender, 249,658.
HEATING SURFACE.—Tubes, 1,636 sq. ft.; firebox, 126 sq. ft.; arch tubes, 6.48 sq. ft.; total, 1,768.48 sq. ft.; grate area, 39 sq. ft.
AXLES.—Main and others, 9¼ by 10 in.; engine truck journals, 6 by 10 in.; tender truck journals, 5 by 9 in.
BOILER.—Type, extension wagon top; outside diameter, first ring, 51⅛ in.; working pressure, 180 lbs.
FIREBOX.—Type wide; length, 90⅞ in.; width, 62¼ in.; thickness of crown, ⅜ in.; tube, ½ in.; sides and back, ⅜ in.; water space, 4 in.; crown staying, 1⅛ in. A. L. Co. standard radial.
TUBES.—Number, 255; diameter, 2 in.; length, 12 ft. 4 in.; gauge, 12, B. W. G.



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ENGINE TRUCK.—Two-wheel, swing centre bearing.

GRATE.—Style, C. I. rocking, to shake in four sections.

TENDER.—Frame, A. L. Co. 10 in. channels; tank, U-shape level top; capacity, 5,000 U.S. galls.; 10 tons coal.

VALVES.—Type, Richmond balanced; travel, 5½ in.; steam lap, 1 in.; ex. lap, 0 in. setting line and line in full gear.

WHEELS.—Diameter, outside tire, 56 in.; centres, 50 in.; material, cast iron; engine truck wheels, 30 in. diameter, cast iron double plate; tender truck wheels, cast iron double plate.

Nova Scotia Society of Engineers.—A meeting of civil, electrical and other engineers was held at Halifax, N.S., Jan. 22, when it was decided to form a society with this title for the purpose of solidifying the engineering profession in the Province, to investigate its resources, to conduct investigations in regard to engineering materials and supplies in Nova Scotia, to raise the standing of the profession, to bring together all branches of the profession as well as architects, contractors and those interested in engineering. A constitution was adopted, the province being divided into four districts for organization purposes, and the meeting was adjourned to Feb. 5 for the election of officers. Following are the officers elected for the current year: President, R. McColl, Provincial Engineer, Halifax; First Vice-President, J. H. Winfield, Manager, Nova Scotia Telephone Co., Halifax; Second Vice-President, P. A. Freeman, Chief Engineer Halifax Electric Tramway Co., Halifax; Councillors: Capt. Bogart, Royal Canadian Engineers; W. G. Yorston, City Engineer, Sydney; J. J. Taylor, Halifax and North-Eastern Ry. Surveys; L. H. Wheaton, Engineer of Maintenance of Way, Halifax and South-Western Ry.; Secretary, Professor E. Brydone-Jack; Treasurer, S. Fenn, Superintendent Direct United States Cable Co.; Auditors, H. W. Johnstone and L. Allen, Halifax.

The Temiskaming and Northern Ontario Ry. Commission has ordered 6,300 tons of 80-lb. steel rails from the Algoma Steel Co. for June delivery.

The Ottawa Construction Co., Parry Sound, Ont., which was in the railway contracting business, has made an assignment to T. W. Quinn, Parry Sound, and a meeting of creditors will be held in that town, Mar. 15.

The C.P.R. has issued supplement 2 to W. 97, Western Lines, extending the application of mileage rates as authorized by local freight mileage tariff W. 97 (C. R. C. W. 4), dated Sept. 8, 1902, to the Okanagan branch (Shuswap and Okanagan Ry.) and the Nicola branch (Nicola, Kamloops and Similkameen Coal and Ry. Co.).

The bill introduced into the House of Commons by W. F. Maclean, M.P., to amend the Railway Act in various ways, has been given a good deal of consideration by the Railway Committee. On Feb. 5 the Committee decided, with only two dissentients, not to approve of the clause compelling railway companies to give a fare of 2 cents a mile.

The Canadian Northern Ry. has filed passenger tariffs covering its lines between stations on Stony Plains section and Morinville branch, Alta., on a basis of 3½ cents a mile; on Ridgeville section between Stuartburn and South Junction, Man., on a basis of 3 cents a mile; and between Regina and Prince Albert, Sask., on a basis of 3½ cents a mile.

The C.P.R. is negotiating with the Government for running rights over the Intercolonial Ry. between St. John, N.B., and Halifax, N.S. Sir Thos. G. Shaughnessy, President C.P.R., met the Minister of Railways, the General Manager and the General Traffic Manager of the I.C.R. at Ottawa, Feb. 6, when the matter was fully discussed, and Sir Thomas was asked to submit an offer in writing.

Railway Finance, Meetings, etc.

Baie des Chaleur Ry.—The railway constructed under this title, afterwards transferred to the Atlantic and Lake Superior Ry., and of recent years operated by the bondholders, is reported to have been sold to the Atlantic, Quebec and Western Ry., the price, it is stated, being $1,500,000. The Baie des Chaleur Ry. extends from Matapedia on the Intercolonial Ry. to Paspebiac, Que., 100 miles, and the Atlantic, Quebec and Western Ry. is under construction from Paspebiac to Gaspe. The B. des C. Ry. was one of the C. N. Armstrong enterprises, and has been the subject of a great deal of litigation, as well as of a Royal Commission.

Canadian Northern Ry.—The Manitoba Legislature has passed an act at its current session guaranteeing certain C.N.R. bonds, at the rate of $10,000 a mile, in respect of the construction of a further 115 miles of line in the province.

In connection with the company's bill before the Dominion Parliament seeking the confirmation of the agreement taking over the Qu'Appelle, Long Lake and Saskatchewan Ry., a resolution was submitted in favor of making the rate on the line taken over 3 cents a mile. The Minister of Railways expressed the opinion that this matter should be left to the Railway Commission, and the resolution was defeated.

Canadian Northern Quebec Ry.—Application has been made to the London, Eng., stock exchange to list £1,000,000 of the company's 4% perpetual guaranteed debenture stock.

Canadian Pacific Ry.—A large amount of C.P.R. 4% non-cumulative preferred stock has been sold in London, Eng., at 101½. Reports state that the amount sold is $7,500,000, but the President, while confirming the report as to the price, would not say anything as to the amount sold.

The directors have declared a dividend of 2% on the preference stock and 3% on the common stock for the half-year ended Dec. 31, payable April 2. It was decided to pay at the same time to the holders of common stock ½% as provided for out of the special interest fund accruing from proceeds of land sales.

Official application has been made to list on the London stock exchange £1,000,000 of 4% C.P.R. non-cumulative preference stock, and £1,682,406 of C.P.R. 4% perpetual consolidated debenture stock.

Delaware and Hudson Co.—A loan has been negotiated with the United States Mortgage and Trust Co. for $6,000,000, at 6%, in order to complete the construction of the Quebec Montreal and Southern Ry., the company's line in Canada. The money is to be advanced to the Q.,M. and S. Ry. from time to time as required, the whole being guaranteed for one year by the D. and H. Co.

The Grand Trunk Ry. directors have decided to declare a dividend of 3% on the third preference shares. The amount of these shares is £7,168,055 and they are entitled to receive 4%, but this amount has never been paid. In 1903 a dividend of 1% was paid; in 1904, 2%; in 1905, nothing; and in 1906 there was a dividend of 2%. The first and second preference shareholders receive 5%.

London and Port Stanley Ry.—Following are the officers and directors for the current year: President, Mayor Judd; Vice-President, Alderman Staveley; other directors: A. White and Aldermen Stevenson, Beattie, Gerry, Cooper; Secretary, the City Clerk.

Manitoba and Northwestern Ry.—The Treasurer of Manitoba, in presenting his budget, made the following statement of the dealings of the Province with the railway: The balance due the Province Dec. 31, 1905, was $359,301.42; during 1906, the interest was paid on the amount to the extent of $39,556.89; compound interest on the amount to Dec. 31, 1906, amounted to $22,151.40, making a total of $421,009.71. This amount is less $277,507.48 for land sold during 1906, leaving a balance due the Province of $143,502.23.

Pembroke Southern Ry.—The Ontario Legislature is being asked at its current session for an act authorizing the company to enter into an agreement for amalgamation with the Canada Atlantic Ry. J. A. Thibodeau, Pembroke, Ont., is Secretary of the company.

Temiscouata Ry.—Traffic receipts for Jan. $12,374.60, against $10,898.18 for Jan., 1906.

Toronto, Hamilton and Buffalo Ry.—Earnings for Jan., $55,283.85, against $45,264.13 for Jan., 1906.

White Pass and Yukon Ry.—Unconfirmed reports from White Horse and Vancouver state that the Guggenheim syndicate, which has large investments in the Yukon Territory, has secured the control of this line.

Winnipeg and Hudson Bay Ry.—The Provincial Treasurer of Manitoba laid before the Legislature the following statement of account between the Province and this railway, in his recent budget speech: Balance due the Province Dec. 31, 1905, $258,330.18; interest paid in 1906, $12,806.72; compound interest to Dec. 31, 1906, $15,499.80; total $286,636.70, less amount received from sale of lands in 1906, $79,166.66, leaving a balance still due the Province of $207,470.04.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

J. Penfold, of the Canadian Fairbanks Co.'s staff, Montreal, died recently.

J. W. Duntley, President of the Chicago Pneumatic Tool Company, returned on Feb. 5 from a five weeks' business trip to Europe.

The Locomotive and Machine Co. of Montreal has received an order from the G.T. Pacific Ry. for two 2½-yard Atlantic type steam shovels for May delivery.

The Canadian General Electric Co. is preparing to add another machine shop, with an area of nearly four acres of floor space, to its works at Peterborough, Ont.

C. C. Scott, heretofore in the auditing department of the Quebec and Lake St. John Ry., Que., has opened an office in Quebec in connection with Mussens, Limited, of Montreal.

The Canadian White Co. has secured a contract for the erection of a cement manufacturing plant near Montreal. The cost of the erection and equipment of the plant is estimated at $1,000,000.

Robt. W. Hunt & Co. have been appointed consulting engineers to the receivers of the Union Traction Co., Chicago, and placed in direct charge of the lowering of the car tunnels under the Chicago River.

W. A. Duff, heretofore assistant manager of the Montreal branch office of the Canadian Westinghouse Co., has been transferred to Winnipeg, where he will look after the electrical part of the company's business there.

A. B. Manship, Secretary-Treasurer of the Canadian Wire Co., died at Hamilton, Ont., Feb. 12, aged 56. He came to Hamil-

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PRESIDENT

Traymore Hotel Company
CHAS. O. MARQUETTE - MANAGER

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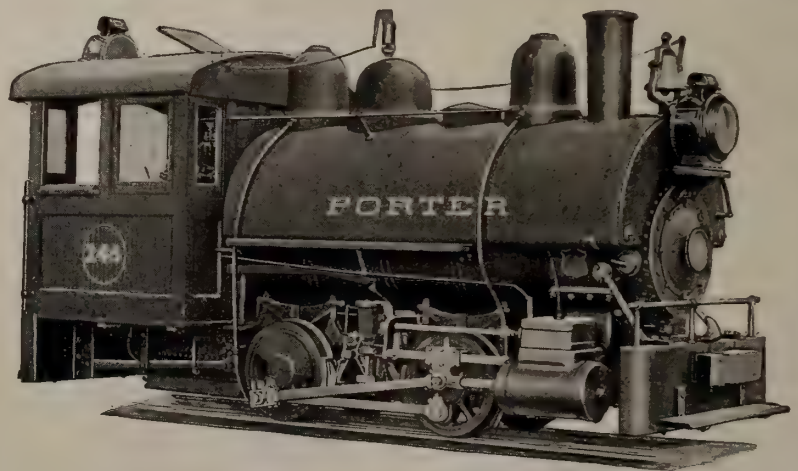

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CONTRACTORS' LOCOMOTIVES ON HAND AND UNDER WAY FOR QUICK COMPLETION. WIDE AND NARROW GAUGE.

LOGGING, MINE AND INDUSTRIAL LOCOMOTIVES.

ton when the company located there in 1902 from Cleveland, Ohio. The funeral took place on Feb. 14, the body being taken to Hooneybrook, Pa.

The M. McKenzie Company has been incorporated under the Dominion Companies' Acts, with a capital of $75,000 and offices at Montreal, to take over the business now carried on under the title of M. McKenzie & Co., at Montreal, as ship chandlers, etc., and to extend the same. The provisional directors are: W. D. Hamilton, A. A. Lunan, A. Dunn, L. Labaye, Montreal; and A. Lunan, Huntingdon, Que.

The Canadian Gold Car Heating and Lighting Co. has been incorporated under the Dominion Companies' Acts, with a capital of $300,000 and offices at Montreal, to manufacture and sell, hire, lease, use, repair and maintain all articles, machines, devices, etc., for heating and lighting cars of all kinds, and also for heating and lighting steamships and vessels of all kinds, etc. The provisional directors are: R. C. Smith, K.C.; F. H. Markey, K.C.; K. G. Robertson, R. C. Cameron, G. G. Hyde, of Montreal.

The American Locomotive Co. has issued a pamphlet illustrating and describing 10-wheel locomotives weighing over 150,000 lbs. It is a sequel to the pamphlet issued by the company last month describing lighter designs of this type. Thirty different designs are illustrated and the principal dimensions of each design given. The designs presented range in weight from 152,000 to 201,000 lbs., and are adapted to a wide variety of road and service conditions. This is the sixth of the series of pamphlets which is being issued by the company, and which now includes pamphlets on the Atlantic, Pacific, consolidation and 10-wheel types.

The Robb Engineering Co., Amherst, N.S., has executed a mortgage to secure an issue of $850,000 of consolidated 6% bonds, redeemable Jan., 1927. Holders of $60,000 Robb Engineering Co. bonds and of $125,000 of Robb-Mumford Boiler Co. bonds have decided to exchange their bonds for these consoldiated bonds, and there has been deposited with the Commercial Trust Co., $190,000 of the consolidated bonds to be used in the exchange of a like amount of Robb Engineering Co. bonds, and $250,000 to be used in the exchange of a like amount of Robb-Mumford Boiler Co. bonds. The two concerns have recently amalgamated.

Canadian Society of Civil Engineers

The 21st annual meeting was held at Montreal, Jan. 29, and two following days, H. D. Lumsden, President, being in the chair. The report of the council showed that the membership had increased during 1906 from 1,387 to 1,531, and in addition there were 134 candidates for membership. A branch of the society had been formed at Toronto, and arrangements were being made for the formation of branches at Quebec and Winnipeg. A fund for the establishment of a series of annual prizes for engineering students had been established and prizes of $25 each had been awarded as follows: H. K. Deutcher, for a paper on "Installation tests for steel rails"; T. M. Fyshe, for a paper on "Reinforced concrete"; and W. H. Williams, for a paper on "Transformer testing." The Treasurer's report showed receipts of $8,779, an increase of $672; and expenditures of $7,963, a decrease of $2,094. A resolution submitted by Major S. Howard, favoring the formation of a reserve engineering corps for Canada, was referred to a special committee. The address of the President is given on another page.

During the day the members visited a number of the industrial plants interesting from an engineering standpoint, travelling in special cars placed at their disposal by the Montreal Street Ry.

At the annual dinner, M. J. Butler, Deputy Minister of Railways and Canals, presided, owing to the absence of the President. The principal toasts were: The Society, proposed by G. W. Stephens, Chairman of the Montreal Harbor Commission, and replied to by Major S. Howard; Our Guests, proposed by the Chairman and replied to by C. H. Catelli, President of the Chamber of Commerce, and S. King, Superintendent Canada Car Co.; the retiring President and Council, replied to by Professor Porter; the Sister Professions, replied to by A. Chausse, Quebec Association of Architects; Visiting Members, replied to by C. H. Mitchell, C. H. Rust, Toronto, and Lieut.-Col. W. P. Anderson, Ottawa.

Following are the officers and counsel for the current year: President, W. McLea Walbank, Montreal; Vice-Presidents, M. J. Butler, Deputy Minister Railways and Canals, Ottawa; P. Johnson, Dominion Bridge Co., Montreal; J. S. Dennis, C.P.R. Irrigation Works, Calgary, Alta.; Council: G. A. Keefer, Vancouver, B.C.; D. McPherson, Ottawa; G. H. Duggan, Sydney, N.S.; C. E. W. Dodwell, Halifax, N.S.; C. H. Rust, Toronto; E. V. Johnson, Ottawa; H. W. Breithaupt, Berlin, Ont.; A. A. Dion, Ottawa; W. McNab, W. F. Tye, J. A. Jamieson, R. S. Lee, R. A. Ross, G. J. Desbarats, J. Kennedy, F. P. Gutelins, W. H. Laurie, Professor R. J. Darley, L. G. Papineau. Except where otherwise stated the address of the councillors in Montreal.

The following have been elected honorary members: Sir B. Baker, engineer of the Forth Bridge, Scotland; Sir Wm. White, Past President Institute of Civil Engineers of Great Britain; O. Chanute, one of the oldest U.S. engineers.

Motor Cars for Government Railways.

The three motor cars which the Intercolonial Ry. has ordered will be built, so far as the car bodies and passenger fittings are concerned, by Rhodes, Curry & Co., Amherst, N.S., and the motor equipment at the I.C.R. shops, Moncton, N.B. Following are more complete details and specifications than were given in our last issue:

GENERAL DIMENSIONS.—Length over end sills, 66 ft.; width over side sills, 9 ft. 10 in.; height, top of sills to underside of plate, 6 ft. 7¼ in.; length, inside sheathing, 65 ft. 1⅜ in.; width, inside sheathing, 8 ft. 11⅜ in.; width between deck rails, 4 ft. 10 in.; height, inside, top of floor to underside of lower deck rail, 7 ft. 7¼ in.; outside of end sill to centre of body bolster, at motor end, 10 ft.; ditto at passenger end, 7 ft.; centre to centre of body bolsters, 49 ft.; centre to centre of needle beams, 10 ft. 6 in.; centre to centre of transoms, 29 ft. 9 in.; height, top of rail to centre of coupler, 2 ft. 10¼ in.; wheel base of truck, 8 ft.; total wheel base, 57 ft. 2 in.

LIGHTING.—Safety Car Heating and Lighting Co.'s vapor light.

SEATS.—Twenty double seats in main body of car, and six in smoking room; upholstered with rattan.

HEATING.—Safety Car Heating and Lighting Cos.' direct steam heating system.

TRUCKS.—Passenger, 4-wheel lateral motion, swing bolster; wheel base, 8 ft.; wheels, 36 in., Krupp steel tires; journals, M.C.B. for 60,000 lb. capacity cars.

BRAKE, ETC.—Westinghouse air, and Westinghouse air signal equipment schedule K.

The sills are to be of Douglas fir or Georgia pine, the under and deafening flooring to be pine, and the upper flooring of Southern or pitch pine, and spark arresters are to be placed on the bottom of the car on the sills, and deafening floor over each truck wheel. Corner posts and side door posts in baggage compartment and boiler room to be of cherry, and the end door posts faced with cherry, side principal doors to be of cherry, others of ash. The outside sheathing will be of cherry, and the inside of white wood and pine.

The specifications for the locomotive portion of the car provide that it is to be easily detached from the car body. The engine truck is carried on four wheels coupled, the bar frame being of mild steel; the car body supported on a cast steel frame is attached to the equalizing spring gear of the locomotive with four steel struts; this is carried on the frame by means of cross bars and coil springs. Bufler gear and springs are arranged in the cast steel body bolster to take the forward and backward motion. The boiler is the vertical type, carried on a cast steel saddle and properly braced; and is to be attached to the saddle in such a way that it can be taken out and replaced. Following are some of the specifications:

CYLINDERS.—Diameter, 12 in.; stroke, 16 in.

WHEEL BASE.—Engine, 8 ft.

BOILER.—Type, vertical; heating surface in tubes, 684.67 sq. ft.; heating surface in firebox, 44.04 sq. ft.; grate area, 11.54 sq. ft.; working pressure, 180 lbs., test, 250 lbs.

WATER TANKS.—Two tanks, 600 galls.

COAL BUNKER.—Capacity one ton.

SPEED.—1% grade, 25 miles.

WHEELS.—Drivers, 42 in. diameter, coupled.

Two motor cars are also under construction for the Prince Edward Island Ry., the car bodies being built at the railway shops at Charlottetown, and the engine, etc., will probably be built at the I.C.R. shops, Moncton. Owing to the various locomotive building plants in Canada being full of orders, it has been found impossible to place contracts for the mechanical parts of these cars.

Canadian Ticket Agents' Association.—At a meeting of the executive committee at Toronto Feb. 6, it was decided to hold the annual meeting in Winnipeg in October. The members will rendezvous in Toronto on Oct. 5, and travel by a special C.P.R. train to Winnipeg. After the annual meeting they will proceed by the Canadian Northern Ry. to Edmonton, thence by the C.P.R. to Calgary and Banff, and return to Winnipeg. It has not been settled whether the return journey from Winnipeg will be made by the C.P.R. or via St. Paul and Chicago. The arrangement of the details has been left to a sub-committee, consisting of W. McIlroy, W. Bunton, W. Jackson, C. E. Horning, R. J. Craig and E. de la Hooke. It was decided not to send a representative to the American Association of General Passenger Agents' meeting at Atlanta, Ga., in Oct.

The Railway Act 1903.—In consequence of the consolidation of the statutes the whole system of arrangement of sections of the Railway Act, 1903, has been changed. All the numbers of sections have been altered, many sections have been divided, others have been redrafted, transposed, or the form of expression somewhat varied or modified, and in some sections unnecessary words have been omitted and saving words introduced. The revised act contains 431 sections against 311 sections and two schedules. J. E. W. Currier, Ottawa, has prepared a second edition of the concordance of the act issued by him in 1904, which will be issued at an early date. The new volume will contain over 1,000 additional references, making a total of upwards of 2,600 references to the sections and sub-sections of the act as revised. The appendices will contain memoranda showing the changes in the numbers of the sections in the original act, and other valuable information. Copies of the book can be obtained from J. Leslie, Department of Justice, Ottawa, at $3.50 each, linen; or $6, half calf.

A bill is under discussion at the current session of the Dominion Parliament to compel railway companies to stop passenger trains for 20 minutes at regular intervals of not less than six hours, to enable passengers to procure meals.

Representatives of the passenger and freight departments of the transportation companies interested in competitive lake and rail traffic met at Montreal, Feb. 1, when it was decided to adopt the schedules of 1906 for the coming season.

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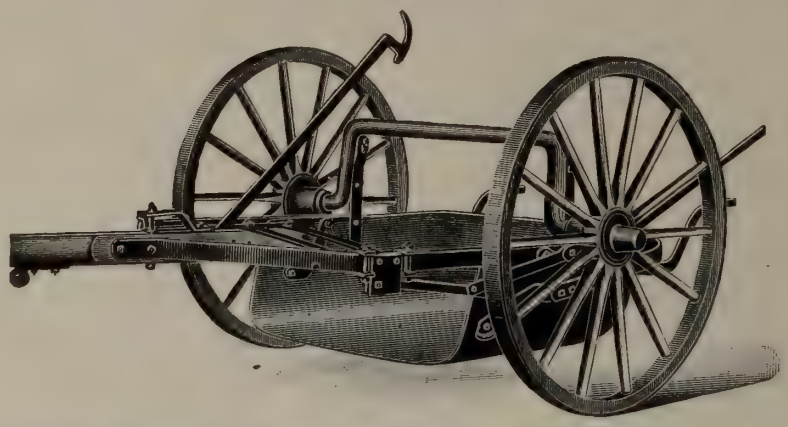

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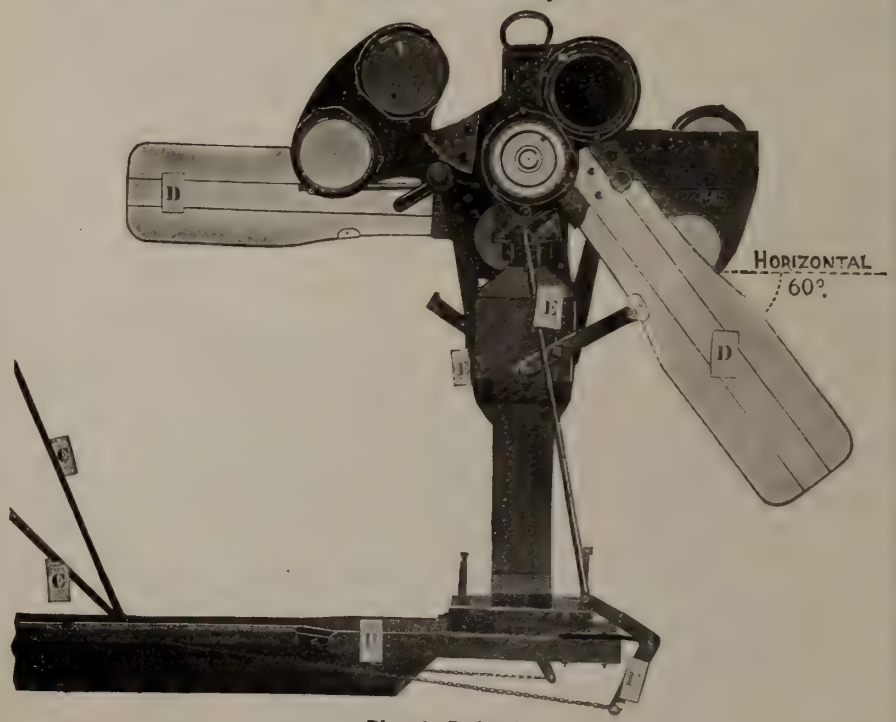

Piper's Patent

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Coal	B.T.U. per lb. combustible	Ash per cent.	Moisture per cent.
Anthracite	14,700	10 to 20	1 to 5
Semi-anthracite	14,900	10 to 20	1 to 5
Semi-bituminous	15,800	5 to 10	1 to 6
Bituminous—Eastern	15,000	5 to 20	2 to 6
" Western	14,200	8 to 25	6 to 15
Lignitæ	12,200	5 to 20	10 to 30

Coal—Consumption—Varies greatly with different conditions of trains, roads, locomotives, etc. Exact comparisons are impossible unless we know all conditions, which is seldom the case. Tests on several roads running into New York in 1897 give these results: Hard Coal: Average per train mile, 17.3 freight cars, 122 lbs.; average per train mile, 7 passenger cars, 112 lbs.; average per freight car mile, 7.05 lbs.; average per passenger car mile, 16 lbs. Soft Coal—Average per train mile, 18.15 freight cars, 120 lbs.; average per train mile, 7 passenger cars, 110 lbs.; average per freight car mile, 6.06 lbs.; average per passenger car mile, 15.07 lbs.

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Railway Commissioners' Rate Orders.

2360. Dec. 17, 1906. In the matter of the application of the Great Northern Ry. Co. under the Railway Act, 1903, sec. 263, for authority to waive notice of a rate of $4.05 net per ton on coal, the applicant company desires to publish, from Coal Creek, B.C., to Helena, Mont. Upon reading the application and the report of its Chief Traffic Officer, and it appearing to the Board that it is desirable and necessary in the public interests that the said rate shall immediately become effective and put in operation—the Board orders that the applicant company is hereby authorized to act upon and put in immediate operation the said rate. That publication of notice of the said rate, as required by the Railway Act, 1903, be, and is hereby waived.

WOOL RATE, MONTREAL TO PETERBORO.

2422. Jan. 7. In the matter of the application of the C. P. R. Co., under the Railway Act, 1903, sec. 262, for an order authorizing it to put into immediate operation a rate of 17 cents per 100 lbs. on about 100,000 lbs. of wool, in grease, from Montreal to Peterboro, Ont., the shipment having been originally made from Lethbridge, Alta., to Montreal, and delivery at Montreal refused; and to dispense with the publication of the three days' previous notice as required under the act—it is ordered that the company is hereby authorized to put said rate into immediate operation, and publication of the three days' previous notice as required by the act is dispensed with.

MINING STUDENTS' RATE TO BRITISH COLUMBIA.

2545. Feb. 4. In the matter of the application of the C.P.R. Co. under the Railway Act, 1903, sec. 275, sub-section 3, for permission to grant a special rate to a party of mining students of McGill University. Upon the report of the Chief Traffic Officer of the Board, the Board orders that the company is hereby given permission to carry the said party at a special rate of $50 per capita for the trip from Montreal to Vancouver, B.C., and return, including side trips to Rossland and Greenwood, B.C., or a rate of $40 per capita from Montreal, Que., to Greenwood and Rossland, B.C., and return. That any other parties who may desire to travel for the same purpose to British Columbia, or any other mining district, be granted equally favorable terms until otherwise ordered by the Board.

American Railway Engineering and Maintenance of Way Association.—The annual meeting of the executive committee was held in Montreal, Jan. 25. W. McNab, Assistant Engineer G.T.R., was selected for election as Vice-President at the annual convention in Chicago, Ill. The other business discussed had to do with the annual meeting. The members of the committee present were entertained at luncheon at St. James Club, by F. Scott, Treasurer G.T.R., and at dinner at the Windsor Hotel, by F. H. McGuigan, Fourth Vice-President G.T.R.

The Donnelly Salvage and Wrecking Co., Kingston, Ont., wrote us recently: "We are pleased to see the magnificent paper you are sending out."

The Manitoba and Saskatchewan Coal Co. has been incorporated under the Dominion Companies' Act, with a capital of $1,000,000 and offices at Winnipeg, to develop coal and other mines, and in connection therewith to construct railways and tramways; to operate steam and other vessels, and to construct wharves, docks, etc. The provisional directors are: C. Vokes, Quill Lake, Sask.; W. W. McMillan, E. Thomson, A. S. Swinford, J. C. Thomson, Winnipeg, Man.

MAINLY ABOUT PEOPLE.

Geo. Hughes, formerly Inspector of Bridges, G.T.R., died at Toronto, Jan. 31, aged 88.

J. F. McElhenny, baggage master I.C.R., Halifax, N.S., died there suddenly, Feb. 10.

City Engineer Parsons, of Stratford, Ont., has resigned to go into private practice at Winnipeg.

Sir C. Rivers Wilson, President G.T.R., is reported to have been seriously ill in England recently.

C. M. Hays, Second Vice-President and General Manager G.T.R., left Montreal Feb. 22 for England.

C. Moon, of the Toronto City Engineer's Department, has been appointed City Engineer, Prince Albert, Sask.

H. W. Edwards, C.P.R. ticket agent, Winnipeg station, was married in London, Ont., recently, to Miss E. Hawker.

Many happy returns of the day to A. H. Baird, C.P.R. ticket agent, Paris, Ont., born at Montreal, Mar. 1, 1834.

J. H. Phillips, manager Chateau Frontenac, Quebec, fell on the sidewalk in Montreal, Jan. 24, and fractured a bone in his foot.

G. J. Grammer, Vice-President New York Central Lines, and Traffic Manager of the lines west of Buffalo, died in Chicago, Feb. 4.

Mrs. G. G. King, wife of Senator King, one of the Commissioners of the New Brunswick Ry. and Coal Co., died at St. John, N.B., Jan. 29.

Jas. Walton, railway contractor, was found frozen to death on the prairie near Medora, Man., Feb. 12. He had been missing for nearly a week.

D. B. Hanna, Third Vice-President Canadian Northern Ry., and Mrs. Hanna, returned to Toronto early in Feb. from a trip to Florida and Cuba.

Deer Lodge, a suburban hotel near Winnipeg, the property of R. J. Mackenzie, son of W. Mackenzie, President Canadian Northern Ry., was burned recently.

G. McL. Brown, General Passenger Agent, Atlantic Steamship Lines, C.P.R., was born at Hamilton, Ont., Jan. 29, 1866, not 1856, as stated in our Jan. issue.

D. B. Hanna, Third Vice-President, Canadian Northern Ry., been has elected a director of the Western and British America Assurance Companies, Toronto.

I. Curry, son of N. Curry, President Rhodes, Curry & Co., Amherst, N.S., died in New York city, where he was attending college, Feb. 8, of pneumonia, aged 19.

J. J. McGee, who has retired from the office of clerk of the Privy Council of Canada, was for about 13 years after coming to Canada in the service of the Intercolonial Ry.

W. J. Francis, Montreal, has been awarded the Gzowski gold medal for 1906, by the Canadian Society of Civil Engineers, for a paper on "Hydraulic Lift Locks in Canada."

B. H. Bennett, General Agent Chicago and Northwestern Ry., Toronto, has recovered from a severe attack of la grippe and pneumonia, which commenced early in Jan.

C. A. Malbœuf, formerly in the C.P.R. service at Montreal, has been appointed District Freight Agent for all railway lines in Oregon owned or controlled by the Southern Pacific System.

G. Ham, of the C.P.R. headquarters' staff, has sufficiently recovered from the effects of his recent operation to leave the hospital, and will probably start for a trip abroad in March.

G. H. Walker, formerly G.T.R. cashier at Guelph, Ont., who was arrested at Toledo, Ohio, was sentenced to six months' imprisonment for embezzling $2,500 of the company's funds.

H. J. Wicksteed, C.E., of the Mackenzie, Mann & Co.'s railway system, delivered an address upon the Georgian Bay canal project before the Canadian Club, Montreal, Feb. 4.

C. W. Chivers, draughtsman in the office of the Assistant Chief Engineer, C.P.R., Winnipeg, was presented with a silver tea service by the staff on the occasion of his recent marriage.

L. B. Merriam, who was appointed recently as Division Engineer, G.T. Pacific Ry., at Winnipeg, has been engaged in engineering since 1880, almost exclusively engaged in railway work.

A. M. Nanton, Managing Director of the Alberta Ry. and Irrigation Co., Winnipeg, and J. Carruthers, grain merchant, etc., Montreal, have been added to the Dominion Bank directorate.

J. McGrail, chief clerk in the office of the Fourth Vice-President, C.P.R., Montreal, was injured in a runaway, Feb. 1, while attending the funeral of his grandfather, who was killed in a street accident.

H. McMillan, brother of the late Senator Jas. McMillan, who died at Detroit, Mich., Feb. 11, was a native of Hamilton, Ont., and was a son of one of the first officers of the Great Western Ry.

R. B. VanHorne, son of Sir Wm. C. Van Horne, is reported to have been appointed General Manager or Assistant General Manager of the Cuba Rd., with office at Camaguey, Puerto Principe, Cuba.

Myron E. Evans, President Cape Breton Ry., and residing at White Plains, N.Y., was among those killed in a railway accident on the New York Central and Hudson River Ry. in New York City, Feb. 16.

Mrs. Scott Griffin, wife of the Superintendent, Canadian Northern Express and Telegraph Companies, Winnipeg, has, with her children, been visiting her parents, W. and Mrs. Mackenzie, at Benvenuto, Toronto.

T. A. Edison was born at Milan, Ohio, Feb. 11, 1847, his parents being Canadians. He became a railway newsboy at 12 years of age, running on the G.T.R., and he was for a time a telegraph operator on that railway at Stratford, Ont.

N. Dyment, who died at Barrie, Ont., Feb. 4, was at one time engaged in the supplying of timber for the Great Western Ry. construction, and latterly was a director of the Goderich Elevator Co., as well as of a number of other industrial concerns.

R. Dupont, who has been appointed a Dominion Immigration Agent for the New England States, has been for some years engaged in the promotion of immigration to the Lake St. John country, in the interests of the Quebec and Lake St. John Ry.

J. N. Sutherland, who will take up his residence near Toronto on his retirement from the C.P.R. service April 30, entered the company's service about two years after it was formed, and since Jan., 1896, has been General Freight Agent at St. John, N.B.

J. M. Robinson, who died at St. John, N.B., Feb. 2, aged 51, was for some years engaged in marine business in St. John, and in South America; and on the organization of the present St. John Ry. Co., was elected Vice-President, which position he retained until 1905.

The name of A. G. Blair, law clerk of the Board of Railway Commissioners, son of the late Hon. A. G. Blair, and a member of the bar of New Brunswick, will be submitted to the Benchers of the Law Society of Upper Canada, under the rule governing admission to the bar in special cases.

S. S. Fuller, who has retired from the postmastership of Stratford, Ont., was President of the Stratford and Huron Ry., a director of the Port Huron and Lake Erie

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Ry., and was also interested in the construction of the line from Stratford to Wiarton, all of which have since passed into the G.T.R. system.

John Ennis, Passenger Manager of the Allan Line Steamships at Liverpool, Eng., has retired to private life after 40 years' service. A committee has been formed, of which Lord Strathcona is chairman, to arrange for the presentation of a testimonial to Mr. Ennis, in recognition of his services to Canadian interests.

W. Mackenzie, President Canadian Northern Ry., left Toronto Feb. 14, accompanied by the Misses Ethel and Kate Mackenzie, and were joined in London, Eng., by Miss Mackenzie and Miss Grace Mackenzie, the whole party going from there to the south of France with the intention of remaining a couple of months.

J. N. Beckley, President Toronto, Hamilton and Buffalo Ry., Rochester, N.Y.; E. Van Etten, Vice-President New York Central and Hudson River Rd., are President and Vice-President respectively, and A. G. Yates, President Buffalo, Rochester and Pittsburg Ry., Rochester, N.Y., is a director of the Bagdad-Chase Gold Mining Co.

D. Macarthur, of Winnipeg, who died in Chicago, Ill., Jan. 23, was engaged in promoting the Alberta and Northwestern Ry., projected from the International boundary, via Medicine Hat, to Edmonton and the Peace River country. He was one of the original promoters of the Manitoba and Northwestern Ry, now part of the C.P.R. system.

D. B. Hanna, Third Vice-President Canadian Northern Ry., has succeeded the late Sir Wm. P. Howland as a director of the London and Canadian Loan and Agency Co. The annual report in referring to the matter says that Mr. Hanna's well-known business ability and long connection with Western Canadian affairs will prove of great advantage to the company.

W. P. Snyder, who has been appointed agent Great Eastern Fast Freight Line, New York, entered railway service April 1, 1894, in the operating department of the Central Rd. of New Jersey. He was transferred to the Transportation Department in 1898, and in May, 1902, was appointed Travelling Freight Agent, G.T.R., New York, which position he held until his present appointment.

In a train wreck on the G.T.R. near Guelph, Ont., Feb. 26, in which three persons were killed, and about 40 injured, W. Alderson, G.T.R. Car Inspector, Toronto, had four ribs broken and his forehead hurt; M. A. Overend, Freight Agent Dominion Line Steamships, Toronto, had an arm slightly injured, and J. H. Hetherman, route agent Canadian Express Co., Stratford, Ont., received two scalp wounds.

John Trutch, C.E., who died at Richmond, Surrey, Eng., Feb. 2, was a son of Wm. Trutch, Ashcott, Somerset, Eng., and was born in Jamaica in 1828. He went to British Columbia, B.C., and constructed the Cariboo wagon road and the Alexander Suspension bridge. Subsequently he was on the engineering staff of the Onderdonk Construction Co., at Yale, B.C., on the C.P.R. construction. A brother, Sir Jos. Trutch, K.C.M.G., was the first Lieutenant-Governor of British Columbia.

G. C. Ransom, who has been appointed Assistant General Freight Agent, Michigan Central Rd., Buffalo, N.Y., was born at Victor, N.Y., Aug. 20, 1864, and entered transportation service in 1887, his record being: June, 1887, to Oct., 1898, with the Blue Line, Rochester, N.Y.; Oct., 1898, to Oct., 1899, New York Central Lines, Buffalo, N.Y.; Oct., 1899, to April, 1896, General Freight Department, Michigan Central Rd., Detroit, Mich.; April, 1896, to April, 1906, assistant chief clerk, same department; April, 1906, to Jan. 31, 1907, chief clerk, same department.

Hon. A. G. Blair, who died suddenly, Jan. 25, at Fredericton, N.B., where he had gone on business connected with the amalgamation of the N.B. Telephone Co. and the Central Telephone Co., was made Minister of Railways and Canals in 1896, and resigned in 1903, when the G. T. Pacific Ry. project was introduced. He had previously carried through Parliament the Railway Act creating a Railway Commission for Canada, and on the constitution of this body was appointed Chief Commissioner, which position he resigned Oct., 1904. Latterly he has acted as counsel for the C.P.R. before the commission.

L. H. Wheaton, who has been appointed Engineer of Maintenance of Way and Structures, Halifax and South-Western Ry., was engaged in the construction of the Joggins Ry.; the line from Oxford to New Glasgow, N.S., and the railway in Cape Breton, now part of the Intercolonial Ry. In 1894 he became Chief Engineer of the Coast Ry. Co. at Yarmouth, N.S., becoming General Superintendent on the opening of the line in 1897. He was also engaged in the construction of the Nova Scotia Southern Ry., which is a part of the Halifax and South-Western Ry. In 1901 he joined the Mackenzie, Mann & Co. staff on location and construction of the H. and S. W. Ry.

R. Marpole, who has been appointed to an executive position on the Pacific Coast for the C.P.R., was born in Montgomeryshire, Wales, in 1850, and served for some seven and a half years on the construction and traffic departments of British railways before coming to Canada. He entered the service of the C.P.R. in 1881, serving successively as contractor, assistant manager of construction, Nipissing Division; Superintendent Lake Superior Division; Superintendent Pacific Division, and General Superintendent Pacific Division, which position he held from 1897 to the date of his present appointment. He is also Vice-President Esquimalt and Nanaimo Ry., which the C.P.R. acquired in 1905.

H. Foster Chaffee, who has been appointed Assistant General Passenger Agent, Richelieu and Ontario Navigation Co., at Toronto, was born at Knowlton, Que., Dec. 18, 1868, being a son of the late A. B. Chaffee, director of the R. and O. N. Co., the Dominion Ex. Co., and on the Board of Management of the old South-Eastern Ry. He entered transportation service in 1883, as ticket clerk at Montreal, with the South-Eastern Ry.; entering the C.P.R. service in the following year, and in 1885 being appointed City Passenger and Ticket Agent, R. and O. N. Co., at Montreal. In 1895 he was given charge of the transfer books in addition, and in 1900 was appointed Western Passenger Agent, R. and O. N. Co., Toronto, which position he held until his present appointment.

F. W. Cowie, who has been temporarily appointed Chief Engineer Montreal Harbor Commission, in addition to his present duties as superintendent of the St. Lawrence ship channel construction, was born in Western Ontario, Mar. 27, 1863, graduating from McGill University in 1886. He joined the engineering staff of Montreal harbor under J. Kennedy in the same year, remaining with the Commission until the end of 1888, when the ship channel was taken over by the Department of Public Works. He was successively assistant engineer and engineer of the ship channel, and subsequently reported on the harbors of the Great Lakes. When the ship channel was taken over by the Department of Marine, he was appointed Superintending Engineer.

W. M. Kirkpatrick, who has been appointed General Freight Agent C.P.R., St. John, N.B., is a son of the late Sir Geo. A. Kirkpatrick, formerly one of the C.P.R. directors. He was born at Kingston, Ont., Oct. 8, 1874, and entered railway service Mar. 7, 1892, in the office of the Vice-President, C.P.R., since which he has filled various positions in the Chief Engineer's office, foreign freight office, Montreal; General Freight Agent's office, Toronto; from July, 1899, to Dec., 1902, he was clerk in the office of the Fourth Vice-President; from Dec., 1902, to April, 1905, he was Assistant General Freight Agent Pacific Division, Vancouver, and from April, 1905, to the date of his present appointment he was Export Freight Agent at Montreal.

R. R. Jamieson, whose portrait appears on the first page of this issue, was born at Westover, Ont., Dec. 12, 1856, and entered railway service 1873, his record being: 1873 to 1874, telegraph operator Great Western Ry.; 1874 to 1878, telegraph operator G.T.R.; 1878 to 1880, on construction in Indiana with the Delphi and Chicago Ry.; 1880 to 1883, agent and train despatcher Credit Valley Ry.; 1883 to 1884, on construction C.P.R. in the Northwest Territories; 1884 to 1890, train dispatcher C.P.R., Toronto; 1890 to 1892, Assistant Superintendent C.P.R., Toronto; 1892 to 1896, Assistant Superintendent C.P.R., Smith's Falls, Ont.; 1896 to 1902, Superintendent C.P.R., Farnham, Que.; 1902 to 1903, Superintendent C.P.R., Cranbrook, B.C.; 1903 to date, General Superintendent C.P.R., Calgary, Alta.

Carl Howe, who has been appointed Traffic Manager Merchants' Despatch Transportation Co., New York, was born at Berrien Springs, Mich., June 11, 1870, and entered railway service in the summer of 1889 with the Michigan Central Rd., at Niles, Mich., remaining with that company until the date of his present appointment. His record is: Oct., 1889, to Oct., 1890, clerk in local freight office, Michigan City, Ind.; Oct., 1890, to April, 1893, chief clerk and cashier, same office; April, 1893, to Sept., 1894, local agent, Chicago Heights, Ill.; Sept., 1894, to May, 1898, Travelling Freight Agent, Chicago, Ill.; May, 1898, to Oct., 1899, assistant chief clerk, Freight Traffic Manager's Office, Detroit, Mich.; Oct., 1899, to July, 1900, chief clerk, same office; July, 1900, to Jan., 1907, Assistant General Freight Agent, Buffalo, N.Y. He was President Canadian Freight Association, 1905-06.

J. N. Sutherland, who has retired from the C.P.R. service, was born at Sydney, N.S., in 1843. He entered railway service in 1866 as ticket clerk on the Great Western Ry. at Suspension Bridge, Niagara Falls, Ont., subsequently becoming joint ticket agent for the G.W.R. and Michigan Central Rd. at Rochester, N.Y., and then G.W.R. station master at St. Catharines, Ont. He entered the C.P.R. service on the opening of the Montreal-Toronto line, first filling a position at Toronto Union Station, then becoming local freight agent at Queen's Wharf, Toronto, and afterwards General Freight Agent, Ontario Division. On Jan. 1, 1896, he was appointed General Freight Agent, Atlantic Division, at St. John, N.B., which position he held up to his recent retirement. Mr. Sutherland will in future reside at Thornhill, Ont., where he has a property on Yonge St.

A. E. Duff, who has been appointed General Agent, G.T.R. Passenger Department at Winnipeg, was born at Sherbrooke, Que., May 1, 1872, his record of railway service being: Winter, 1887, shovelling snow on section at Danby, Que.; summer of 1888, water boy on the train between Richmond and Montreal, Que.; Feb., 1889, to Aug., 1889, switchman at St. Bruno, Que.; Aug., 1889, to April, 1890, switchman, St. Isidore Jct., Que.; April, 1890, to Aug., 1890, night telegraph operator, Upton, Que.; Aug., 1890, to Aug., 1892, night telegraph operator, Ac-

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F. F. Busteed, who has been appointed General Superintendent Pacific Division, C.P.R., was born at Battery Point, Que., Oct. 10, 1858, and started railway work as chainman 1879, since which his record has been: 1881 to 1883, transitman; 1883 to 1887, assistant engineer in charge of construction; 1887 to 1889, in charge of location and Division Engineer of Construction, this service being with the C.P.R.; 1890, locating and Division Engineer of Construction, Alberta Ry. and Coal Co.'s extension from Lethbridge, Alta., to the junction at the International boundary with the Great Falls and Canada Ry.; 1890 to 1892, locating engineer and city engineer, Bristol, West Virginia; 1892 to July, 1904, with the C.P.R. successively as roadmaster, Assistant Engineer, Resident Engineer, Engineer of Maintenance of Way and Structures, Division Engineer, Superintendent at Nelson, B.C.; July, 1904, to Feb., 1907, Assistant Chief Engineer Western Lines, C.P.R., Winnipeg.

G. J. Bury, who has been appointed Assistant General Manager C.P.R. Western Lines, was born at Montreal, Mar. 6, 1866, and was educated at Montreal College. He entered railway service on the C.P.R., 1883, since which his record has been: 1883 to 1887, clerk in Purchasing Department and in General Manager's office; 1887 to 1889, secretary to Vice-President, afterwards President; 1889, to Mar., 1890, acting superintendent dining, sleeping and parlor car service; 1890 to Sept., 1899, successively Assistant Superintendent at Chalk River, Ont., and Superintendent North Bay, Ont.; Sept., 1899, to Feb., 1901, Superintendent, Fort William, Ont. Feb., 1901, to Feb., 1902, Superintendent Crow's Nest Pass Line, Cranbrook, B.C.; Feb. to May, 1902, Assistant General Superintendent Lake Superior Division, North Bay, Ont.; May, 1902, to 1905, General Superintendent same division; 1905 to Feb., 1907, General Superintendent Central Division, Winnipeg; entire service with C.P.R.

Alfred Price, who has been appointed General Superintendent Central Division C.P.R., Winnipeg, was born in Toronto, Dec. 6, 1861, and entered railway service Sept., 1879, since which he has been consecutively to 1881, operator, messenger and clerk Credit Valley Ry.; 1881 to 1882, car accountant same road, Toronto; 1882 to 1884, operator and relief dispatcher C.P.R., Toronto; 1884 to July, 1888, train dispatcher same road, Toronto; July, 1888, to May, 1896, car distributor, same road, Toronto; May, 1896, to Aug., 1898, car distributor and Chief Train Dispatcher, same road, Toronto; Aug., 1898, to May, 1901, Superintendent, same road, Toronto; May, 1901, to Sept., 1902, Superintendent districts 8 and 9, same road, Toronto; Sept., 1902, to May, 1903, Superintendent, districts 10 and 11, same road, Toronto; May, 1903, to 1905, Superintendent same road, Fort William, Ont.; 1905 to Feb., 1907, Superintendent of Transportation, C.P.R. Western Lines, Winnipeg.

J. E. Schwitzer, who has been appointed Assistant Chief Engineer C.P.R. Western Lines at Winnipeg, was born at Ottawa, April 19, 1870. During his undergraduate days and at intervals of private practice and general survey and engineering work, he was engaged in the following railway works: 1888, rodman on location of Vaudreuil and Ottawa Ry., and Lake Temiskaming Colonization Ry.; 1889, Assistant Engineer of Construction of the last mentioned line; 1891 to Feb., 1892, Assistant Engineer on location and construction Ottawa and Gatineau Ry.; July, 1893, to Jan., 1894, Assistant Engineer in charge of location and construction Ottawa, Arnprior and Parry Sound Ry.; Feb., 1894, to Dec., 1906, same position, same road; engineer in charge of Central Counties Ry. from South Indian for Canada Atlantic Ry., and on surveys Hull Electric Ry.; July, 1899, to Nov., 1900, engineer in charge of construction C.P.R. yards at Rat Portage, Ont.; Nov., 1900, to Nov., 1901, Assistant Engineer in charge of maintenance of way same road; Winnipeg; Nov., 1901, to Mar., 1903, Resident Engineer, same road, Winnipeg; 1903, to Feb., 1907, Principal Assistant Engineer same road, Winnipeg.

Ontario Jurisdiction Over Railways, etc.

Following is the full text of the bill which has been introduced in the Ontario Legislature by Hon. J. S. Hendrie, with a view of preventing railways, etc., incorporated by the Ontario Legislature from escaping provincial jurisdiction:

1. In this Act the expression "public utility" shall have the same meaning as in the Ontario Railway and Municipal Board Act, 1906, and shall also include railways however operated, street railways and works for the transmission of gas, oil, water or electrical power or energy.

2. In case the undertaking of any company or other corporation operating a public utility and incorporated under a general or special act of the Province of Ontario is, by the Parliament of Canada, declared to be a work for the general advantage of Canada or is absorbed by or amalgamated with or controlled or operated by any company or other corporation whose undertaking has been declared a work for the general advantage of Canada, or which is not subject to the legislative control of this Province, then, unless the Lieutenant-Governor in Council has otherwise declared, all powers, rights, privileges and franchises conferred upon such first mentioned company by letters patent or by any general or special act of this Province, shall thereupon cease and determine, and every municipal by-law passed and every agreement entered into with any municipal corporation authorizing such company to carry on business or granting any franchise thereto shall thereupon become void and be of no effect, and such company shall forfeit all claim to any bonus or other aid granted by any municipal corporation. Provided that nothing in this section contained shall affect the validity of any debentures issued by a municipal corporation for payment of any such bonus in the hands of a bona fide holder for valuable consideration.

3. Notwithstanding anything in any Act contained, no municipal corporation shall hereafter enter into any contract with or pass any by-law in relation to any public utility company, which has been declared to be a work for the general advantage of Canada, or which is not within the legislative jurisdiction of this Province, until the Lieutenant-Governor in Council has approved of such by-law or agreement, and every by-law passed or agreement entered into in violation of this section shall be utterly void and of no effect.

The C.P.R. San Francisco ticket office is now located in the Jas. Flood Building, 77 Ellis Steet.

Senator Davis has given notice of a motion favoring the appointment of a special commissioner to control telephone and telegraph companies, making his work a branch of the Railway Commission.

Canadian Northern Railway Construction.

Canadian Northern Ontario Ry.—A deputation from the company waited on the Ontario Government, Feb. 12, asking aid in the construction of a line from Sudbury to near Port Arthur, connecting the James Bay section of the line with the old Ontario and Rainy River section of the Canadian Northern Ry. The distance is about 500 miles. No definite answer was given to the deputation, but it is understood that a statement of the Government's intention will be made at an early date.

The line from Toronto to Sudbury, of which the portion from Toronto to Parry Sound is open for traffic, is being aided by a guarantee of bonds by the Ontario Government to the extent of $20,000 a mile.

A deputation from Parry Sound has asked the Government to grant the company aid, by means of a guarantee of bonds, for the construction of a line from nine miles north of Parry Sound to North Bay, over which the Temiskaming and Northern Ontario Ry. could have running rights as well as over the main line into Toronto.

The C.N.O. Ry. has acquired 110 acres of the Don Flats, from the north side of Winchester Street bridge to the C.P.R. It is understood that the company proposes to straighten the course of the Don River, and to utilize the land reclaimed for yard and terminal purposes. The company has also agreed to purchase an 80 ft. strip from the city lying between the old Belt Line and the C.P.R. tracks above the Winchester St. bridge in connection with its plans.

The Canadian Northern Ry. is negotiating with the Port Arthur, Ont., Town Council in connection with the proposal to erect an hotel there at a cost of $250,000.

The Manitoba Legislature at its recent session passed an act guaranteeing the company's bonds to the extent of $10,000 a mile, to aid the construction of the following lines: From near Neepawa westerly to the provincial boundary; from near Virden northerly for 20 miles; from near Dundee to near Tyndall, about 15 miles.

Passenger Meetings at Buffalo.

Three passenger meetings were held at Buffalo, N.Y., Feb. 6 and 7, members announcing their rates, arrangements, etc., for the year, in which there were very few new features, except the question of rates to the Muskoka Lakes district, Ont., where the position has changed owing to the opening of the C.P.R. and Canadian Northern Ontario Ry. lines. Some difference of opinion having arisen in this connection, the matter was left over for further discussion.

The Great Lakes and St. Lawrence River Rate Committee elected as Chairman for the current year G. T. Bell, General Passenger Agent G.T.R.; Jas. Morrison, of the C.P.R. General Passenger Department, Montreal, being re-elected Secretary.

The Niagara Frontier Summer Route Committee elected as Chairman for the current year, R. M. Pile, A.G.P.A., Pennsylvania Rd., and Jas. Morrison was elected Secretary, succeeding G. C. Wells, Assistant General Passenger Agent C.P.R., who retired.

The International Water Lines Passenger Association elected the following officers: L. H. Nutting, G.P.A. Southern Pacific Co., New York; Vice-President, C. A. Jacques, T.M. Merchants-Montreal Line, Montreal; Executive Committee: C. H. Nicholson, T. M. Northern Navigation Co., of Ontario; B. W. Folger, Manager Niagara Navigation Co.; T. Henry, T. M. Richelieu and Ontario Navigation Co. Audit Committee: R. F. Church, G.P.A. Northern Michigan Transportation Co.; B. R. Hepburn, Manager Ontario and Quebec Navigation Co.; I. P. Lusk, G.P.A. Diamond Joe Line.

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TRANSPORTATION APPOINTMENTS.

Alberta Ry. and Irrigation Co.—Since the resignation of C. A. Magrath as Land Commissioner, the land department is under the control of the General Manager, but the Assistant Land Commissioner, E. H. Wilson, attends to all the land matters of the company.

Algoma Central and Hudson Bay Ry.—K. J. C. Kinck, Maintenance of Way and Construction Engineer, has resigned.

Allan Line Steamships.—F. De Bevoise, heretofore Passenger Agent Royal Mail Steam Packet Co., New York, has been appointed New York Passenger Agent Allan Line Steamships. Office, Flat Iron Building.

Board of Railway Commissioners.—An Ottawa press dispatch says that J. Ogilvie, Master Mechanic G.T.R., Ottawa Division, will probably be appointed inspector of railway rolling stock for the Commission.

Canadian Pacific Ry.—W. M. Kirkpatrick, heretofore export freight agent, Montreal, has been appointed General Freight Agent, Atlantic Division, succeeding J. N. Sutherland, retired. Office, St. John, N.B.

P. B. Earle, heretofore assistant to the Export Freight Agent, has been appointed Export Freight Agent, succeeding W. M. Kirkpatrick, appointed General Freight Agent, St. John, N.B. Office, Montreal.

Geo. Hodge, heretofore chief clerk to the Vice-President, has been appointed Superintendent of Montreal Terminals, reporting direct to the General Superintendent. This is a new office.

J. B. Elliott, in addition to his present duties as General Master Mechanic Eastern Lines, takes charge of the Eastern Division as acting Master Mechanic.

J. Wilkinson, relieving foreman, has been appointed locomotive foreman at Hochelaga, Que., succeeding M. J. Buckley, appointed night foreman at Outremont, Que.

C. A. Stark, heretofore general foreman at Carleton Junction, Ont., has been appointed assistant Master Mechanic, Lake Superior Division, North Bay, Ont.

H. C. Kyle, heretofore Master Mechanic Eastern Division, has been appointed Master Mechanic Lake Superior Division, with office at White River, Ont., vice G. Fulton, appointed general foreman at Carleton Junction, Ont.

A. H. Bilbie is appointed District Master Mechanic, district 2, Lake Superior Division. Office, White River, Ont.

J. E. Schwitzer, heretofore Principal Assistant Engineer at Winnipeg, has been appointed Assistant Chief Engineer, Western Lines, succeeding F. F. Busteed, appointed General-Superintendent Pacific Division. Office, Winnipeg.

A. Hatton, heretofore Chief Train Dispatcher at Kenora, Ont., has been appointed Inspector of Train Dispatching, Western Lines, succeeding J. K. Savage, who has been reappointed Chief Train Dispatcher at Kenora.

O. O. Winter, Superintendent at Brandon, Man., is reported to have resigned to enter the G.T. Pacific Ry. service.

We were officially advised Feb. 27, that the following appointments would probably be made: C. S. Maharg, now Assistant Superintendent at Moose Jaw, to be Superintendent at Brandon, Man.; G. E. Graham, now Assistant Superintendent at Brandon, to be Superintendent of new district to be established, with headquarters at Souris, Man.; J. G. Taylor, now Assistant Superintendent at Fort William, to be Superintendent Winnipeg terminals.

G. J. Evans, chief draughtsman in the motive power department, Montreal, has been appointed inspector of the locomotives now under construction in the U.S. Headquarters, Philadelphia, Pa.

J. B. Perrigo has been appointed Assistant Roadmaster District 2, Pacific Division, succeeding J. Stormont, appointed Roadmaster Shuswap section.

G. G. McKay has been appointed City Passenger Agent at Detroit, Mich., succeeding A. E. Edmonds, appointed District Passenger Agent there.

Dominion Atlantic Ry.—D. J. Murphy, Jr., heretofore Chief Dispatcher and Trainmaster, has been appointed Trainmaster and Assistant Traffic Superintendent.

R. B. Browne has been appointed Chief Train Dispatcher.

Dominion Coal Co.—W. S. Andrews, of Toronto, has been temporarily appointed Comptroller, and will take over the duties heretofore discharged by J. R. Blackett, who has resigned the office of General Auditor.

Grand Trunk Ry.—W. E. Tibbits, heretofore General Freight and Baggage Agent, Niagara Navigation Co., has been appointed chief clerk to the General Baggage Agent, G.T.R., Toronto.

W. Duperow, formerly General Manager Huntsville, Lake of Bays and Lake Simcoe Navigation Co., has been appointed Travelling Passenger Agent G.T.R. Headquarters, Toronto.

R. T. Dass, train dispatcher, Stratford, Ont., has resigned to take service with another company in the United States.

D. Crombie has been appointed Master of Transportation, Middle Division, succeeding S. Ennes, appointed Assistant Superintendent, Ottawa Division. Office, London, Ont.

L.H. Nolan has been appointed Superintendent of Terminals, Detroit, Mich., with office at Milwaukee Jct. He will have charge of all station, train and yard employes of the transportation department. All reports and communications heretofore sent to the General Yardmaster will hereafter be sent to the Superintendent of Terminals. The office of General Yardmaster is abolished.

The following agents have been appointed: Goodwood, Ont., G. Evans; Craigvale, Ont., C. Gordon; Allandale, Ont., A. McNabb; Barrie, Ont., A. McNabb; Thornton, Ont., G. L. Allen; Lucan, Ont., H. J. Craig; Woodstock, Ont., M. C. Dickson; Neustadt, Ont., C. E. Brigham.

A. E. Duff, heretofore Travelling Passenger Agent, Montreal, has been appointed General Agent Passenger Department. Office, 513 Ashdown Block, Winnipeg. His territory will be the Canadian Northwest, Port Arthur, and west to, but not including, the Rocky Mountains. He will report to General Passenger and Ticket Agent, Montreal.

F. P. Dwyer, heretofore Eastern Passenger Agent, has been appointed General Agent Passenger Department. Office 290 Broadway, New York City. His territory is as follows: Connecticut, that portion of the state on the line of the New York, New Haven and Hartford Rd. from New York to New Haven Conn; Delaware, entire state. District of Columbia, Maryland, entire state; New Jersey, entire state; New York City and Long Island; Pennsylvania, that portion of the state south of but not including the lines, of the Cumberland Valley Rd., Philadelphia and Reading Ry., and Lehigh Valley Rd., Mason to Easton, via Carlisle, Harrisburg, Lebanon, Reading and Allentown. He will report to General Passenger and Ticket Agent, Montreal.

R. Bushby, heretofore Travelling Passenger Agent, has been appointed Eastern Passenger Agent. Office, 6 Burgess Block, Cortland, N.Y. His territory is as follows: New York, entire state except New York City and Long Island; except between Buffalo, Suspension and Lewiston, inclusive; except on and north of the lines of the Rutland Rd., New York and Ottawa Rd., and New York Central (Adirondack Division) Rd. from Ogdensburg, N.Y., via Moira, Tupper Lake, and Malone Jct., to Rouses Point, N.Y., except the lines of the Delaware and Hudson Co., north of Plattsburg, N.Y.; also excepting that portion on and north of the lines of the Boston and Albany, and Boston and Maine Railroads and east of the Delaware and Hudson Co., but including the lines of the Delaware and Hudson from Albany, Troy and Mechanicville to Plattsburg inclusive and all west thereof; Pennsylvania, that portion of the state east of but not including the lines of the Baltimore and Ohio Rd., the Pennsylvania Lines, and the Pennsylvania Rd., Hyndman to Buffalo, via Berlin, Johnstown, Blairsville, Freeport and Oil City to and including the lines of the Cumberland Valley Rd., Philadelphia and Reading Ry., and Lehigh Valley Rd., Mason to Easton, via Carlisle, Harrisburg, Lebanon, Reading and Allentown. He will report to General Passenger and Ticket Agent, Montreal.

Halifax and Southwestern Ry.—P. Mooney, heretofore District Freight and Passenger Agent, has been appointed General Freight and Passenger Agent. Office, Halifax, N.S.

Lake Superior Corporation.—G. S. Wynne has been appointed Acting General Manager until a successor to W. K. Sawyer is chosen.

Michigan Central Rd.—C. E. Dearborn has been appointed Division Engineer at St. Thomas, Ont., vice A. S. Zinn, resigned to accept service elsewhere.

Pere Marquette Rd.—W. Turtle has been appointed car foreman at St. Thomas, Ont., vice T. H. Stone, deceased.

Richelieu and Ontario Navigation Co.—R. A. Carter, heretofore Division Freight and Passenger Agent, Toronto, has been appointed Assistant General Freight Agent. Office, Montreal. The office of General Freight Agent is abolished.

R. McEwen, heretofore General Freight and Baggage Agent, has been appointed General Baggage Agent.

G.T.R. Betterments, Construction, Etc.

St. Lambert-Ste. Rosalie Second Track.—Tenders have been asked for the construction of a second track between St. Lambert and Ste. Rosalie Jct., Que., about 33 miles. This section includes the bridge over the Richelieu River between Beloeil and St, Hilaire parishes. It is expected to have the work completed this year.

Ottawa Central Station.—The G.T.R. is carrying forward the negotiations for the construction of a central station and hotel at Ottawa. C. M. Hays, Second Vice-President and General Manager, among other matters discussed with the assessment committee of the City Council the question of a fixed assessment of the property. He asked for an assessment of $200,000 on the hotel and $150,000 on the station building, the widening by the corporation of Little Sussex St., and the closing of certain small streets. The plans of the proposed structures and of the lay-out of the grounds were laid before the committee. The question of the terms upon which the central station will be utilized by the C.P.R. are under consideration by the Board of Railway Commissioners, the matter having been argued by the railway officials Feb 12. See also Ottawa Terminal Co., pg. 161.

Toronto to Hamilton.—A start has been made in the work of laying the line between Toronto and Hamilton, Ont., with 100-lb. rails, in place of the present 80-lb. steel.

London Track Elevation.—Several informal discussions have taken place at meetings of committees of the London, Ont., City Council, respecting the elevation of the tracks there. It is understood that the Railway Committee has decided to visit Chicago and look over the work of track elevation there which the G.T.R. has just completed, before taking up the further discussion of the matter with the G.T.R.

Sarnia Tunnel Electrification.—The work of erecting the structural steel work at the Canadian side of the tunnel has been completed.

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National Transcontinental Railway.

The Dominion Parliament has under consideration an act the object of which is to make the statute respecting payment of wages upon public works applicable to the Transcontinental Railway Commissioners' contracts.

In a recent discussion in the House of Commons when papers relating to the projected construction of a central station at Quebec were asked for, the Premier pointed out that the Transcontinental Railway Commissioners had no power to build terminals at Quebec this work rested with the Quebec Bridge and Railway Co., which had been authorized in 1903 to enter Quebec by the bank of the St. Lawrence. The Government had not surrendered its control; it could refuse to guarantee the Q.B. and Ry. Co.'s bonds if its plans were not satisfactory.

Tenders have been opened for the construction of five additional sections as follows:

DISTRICT A.—From Moncton westerly 50 miles: G.T. Pacific Construction Co.; Eastern Construction Co. of Amherst, N.S.; M. T. Schurman & Co., Prince Edward Island; Eastern Construction Co., Ottawa.

From Grand Falls, N.B., westerly to the New Brunswick-Quebec boundary: G.T. Pacific Construction Co.; Toronto Construction Co.; Eastern Construction Co. of Amherst; Eastern Construction Co., Ottawa; Lyons & White, Ottawa.

DISTRICT B.—From Quebec Bridge easterly for about 150 miles: G.T. Pacific Construction Co.; Russell-Chambers, Limited, Toronto; M. P. & J. T. Davis, Ottawa; O'Brien & Mullarkey, Montreal.

From 150 miles west of Quebec Bridge to Weymontachene, Que., about 45 miles: G. T. Pacific Construction Co.; Russell-Chambers, Limited, Toronto; MacDonnell & O'Brien, Renfrew, Ont.

DISTRICT C. AND D.—From about eight miles west of Abitibi River, crossing easterly for 150 miles: G.T. Pacific Construction Co.; E. F. Fauquier, Ottawa.

The contracts were awarded Feb. 26 as follows: district A, from Moncton westerly, 50 miles; district B. from about 150 miles west of Quebec Bridge to Weymontachene, Que., and districts C and D from about eight miles west of Abitibi River easterly for 150 miles, to the Grand Trunk Pacific Construction Co.; district A, from Grand Falls, N.B., westerly to the New Brunswick-Quebec boundary to Lyons & White, Ottawa; district B, from 150 miles west of Quebec Bridge to Weymontachene, Que., to M. P. & J. T. Davis, Ottawa. It is said that the cost of the whole 457 miles, according to the accepted tenders, will be about $13,000,000.

There are now under construction on the Government portion of the Transcontinental Ry. 395 miles, which added to the 457 miles awarded Feb. 26, makes 852. This is nearly the half of the line between Moncton and Winnipeg. In connection with the section between Chipman and Grand Falls, N.B., the route has not yet been definitely decided upon by the Commission, but there is no doubt the report of the resident engineer, which is in favor of the centre route, will be accepted by the Commission and the Government. The statute calls for the most central route through the province easterly. The St. John Valley route would not be a central line. But, apart from the statute, the Transcontinental engineers have been able to discover a shorter and a cheaper route through the centre of the province than was to be found by the St. John River Valley.

GRAND TRUNK PACIFIC RY.

C. Schreiber, C.M.G., General Consulting Engineer to the Government, and Chief Engineer Western Division National Transcontinental Ry., has reported as to the progress made to Sept. 1, 1906, with the surveys, location and construction of the Western Division of the National Transcontinental Ry. (G.T. Pacific Ry.). The preliminary surveys have sufficiently advanced to enable the company to submit route maps of the line from Winnipeg, touching Saskatoon and Edmonton, and passing through the Yellow Head Pass to the Pacific slope at the junction of the Salmon River with the Fraser River, a distance of about 1,247 miles. Of this the Government has approved from Winnipeg to a short distance east of Edmonton, about 776 miles in all. Edmonton being favorably situated for the establishment of the principal workshops, sorting and distributing yards, cattle yards, warehouses and grain elevators, a large area of land has been purchased for the purpose, and will give ample room for quick despatch of business at that important point. Plans and profiles of location have been submitted and approved by the Government from Portage la Prairie, Man., to nine miles east of Edmonton, about 720 miles, upon which construction is in progress. Mr. Schreiber had recently made an inspection of this section of the line, and found the location has been carefully selected with a view to obtaining a first-class alignment and favorable gradients, the curvature is light and the maximum gradients against the traffic going west are 0.50%. In securing so good an alignment and gradients, heavy work has been encountered in the form of high embankments, deep cuttings and large structures at certain points, such as at Pine Mull, Minnawashta, Birdtail and Cut Arm Creeks; the little Saskatchewan River, the Touchwood, Eagle and Beaver hills, the Qu'Appelle valley and at Battle River.

He was disappointed with the progress made with construction; it had not advanced, and was not advancing as rapidly as could be desired. This was due to the impossibility of securing the requisite number of men for a vigorous prosecution of the work. In fact, so short of men were the contractors that in several instances many teams of horses were standing idle in the stables, owing to the inability to secure teamsters to drive them. It is, however, only fair to state that the works executed are of a substantial character. The embankments and cuttings are neatly finished off, and the latter are well drained by side surface ditching. Following is a statement of the approximate quantities on the work on the section between Portage la Prairie and Edmonton, and the amount of work executed thereon up to Sept. 1, 1906:

Character of Work	Total.	Quantity Done.
Clearing, acres	1,420	1,409
Grubbing, acres	260	97
Earth excavation, cubic yards	17,700,000	5,091,000
Rock, cubic yards	797,000	314,700
Culverts, lineal feet	62,000	17,900
Large trestle bridges, lineal feet	16,000	4,400
Smaller pile bridges, lineal feet	11,000	2,060
Steel bridges over large rivers, lineal feet	5,700	Nil.
Telegraph and telephone lines, miles	750	20,000 telegraph poles delivered
Fencing, miles	1,500	Nil.
Track complete, including ballasting	816	50,000 tons rails delivered; 160,000 ties delivered; 2 miles track laid.
Station and other buildings, number	265	Nil.
Cattle-guards and sign boards, number	1,500	Nil.
Rip-rap, cubic yards	20,000	200

The material for the balance of the culverts, trestles and pile bridges, as well as the materials for the fencing, telegraph and telephone lines, can be taken out during the winter and delivered upon the ground with much greater facility than in summer, and if nothing unforeseen occurred, it might be anticipated that the track would reach Edmonton by the latter end of the autumn of 1907.

The Ontario Legislature has under consideration a bill respecting the land grant for the construction of the Lake Superior branch. By the present act the Government is to survey the land into townships, and by the amendments the company will take the land in blocks with areas about the size of three townships, and the Government will have to undertake the work of outlining. This will cost about $24,000, whereas the cost of surveys by townships would have amounted to three times that much.

The McDonald, McMillan Co. expects in a short time to be able to make a start upon construction of the line from Portage la Prairie to Winnipeg. The erection of the concrete piers for the bridge across the Saskatchewan River is being proceeded with by Gunn & Son, contractors. There are four piers and two heavy abutments.

It is expected that a conference between the C.P.R., the Canadian Northern Ry., the Great Northern Ry. U.S., and the G.T.P.Ry. officials will be held in Calgary, Alta., in March, with a view of an arrangement being reached respecting the terminal arrangements for all lines in the city.

Referring to the various mileages mentioned in connection with the Pacific section of the line, Senator Scott stated recently that the first figures were merely estimates, as no surveys had been made. It had now been found from surveys that the line would have to go through the Yellow Head Pass, and that the mileage would be about 766. The plans for the line in B.C. have been filed at Victoria, and approved by the Commissioner of Works. Entering the Province by the Yellow Head Pass the line will pass to the north of Cowdung and Moose lakes, following the northerly banks of the south fork of the Fraser river, until it is joined by the north fork. The latter will be crossed near its mouth and the main river followed to a point in the vicinity of Fort George. This fort, which is at the junction of the Fraser and Lower Nechaco, will be left to the south, and the valley of the latter, on the north bank, followed almost due west to Fraser lake. Skirting to the north of Fraser lake, the line, at the westerly extremity, will change in course, going northwesterly along the northeast banks of Endako river and Burns and Decker lakes to the headwaters of the South Bulkley river. Contrary to general expectation, the map of the proposed route shows that the railway will not be built on the west side of Bulkley river, but on the east. This will take it through the Hudson's Bay ranch and Moricetown, and it will cross the Skeena near Hazelton, thence turning abruptly to the southwest, following the north bank of the Skeena entirely to its mouth. From that point it will cross to Kaien Island and the terminus at Prince Rupert.

Following are the officers and directors of the Quebec Cartage and Transfer Co., elected at the organization meeting, Jan. 22: Pres., Hon. E. B. Garneau; Vice-President, Hon. R. Turner; Managing Director, J. Hone, Jr.; Secretary-Treasurer, N. Belleau; other directors, Hon. A. Turgeon, R. Forget, Montreal; and J. H. Walsh, Sherbrooke, Que. With the exception of the two last named, all the officers and directors reside in Quebec.

The Winnipeg Jobbers and Shippers Association, which established a transportation department recently, has the following officers: President, J H. Ashdown; Vice President, E. D. Martin; Executive Committee, W. Georgeson, A. L. Johnston, D. E. Sprague, G. F. Galt, D. E. Williams, H. M. Belcher, E. F. Hutchings, A. Macdonald; Sec. Treas., A. B. Kent; Manager Transportation Department, G. E. Carpenter.

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Quebec and Lake St. John Railway.

We are advised that Mackenzie, Mann & Co., Ltd., have secured control of the Quebec and Lake St. John Ry., the main line of which extends from Quebec to Roberval, 189 miles, with branches from Chambord Jct. to Chicoutimi, 51 miles, and from Valcartier to St. Gabriel, 4 miles; 244 miles in all.

The Great Northern Ry., one of Mackenzie, Mann & Co.'s eastern lines, and now included in the Canadian Northern Quebec Ry., has for some time past had running powers over the Q. and L. St. J. Ry. from Rivière a Pierre Jct. to Quebec City, but is now building a cut-off from near Garneau Jct. to secure a more direct route from Ottawa to Quebec. The Q. and L. St. J. Ry. has extensive and very valuable terminals in Quebec City.

The Q. and L. St. J. Ry. will no doubt be operated as part of the Canadian Northern Quebec Ry., and by the officials of that line. J. G. Scott, General Manager of the Q. and L. St. J. Ry., will probably remain in the service in some other capacity.

Railway to Hudson Bay.

In the House of Commons Feb. 22, W. E. Knowles, M.P. for Assiniboia West, moved an amendment to the motion to go into supply, urging the Government to take all steps possible for the speedy construction of a railway to Hudson Bay. T. Greenway expressed his conviction that the water route via the Bay and Straits would be open for four months of the year. Sir Wilfrid Laurier, in discussing the congestion of railway traffic, said that additional rolling stock was not the only thing needed, an outlet to the sea on Hudson Bay was also required. There had been in the statutes for years a provision that the country would aid in the construction of a line to Hudson Bay, by a subsidy of 12,000 acres of land per mile, but no one had come forward prepared to build on those terms, and he thought the time had come to make a new effort and provide some other means of building it. The matter was engaging the Government's attention and he hoped that before the end of the session a policy in regard to the matter would be announced

C.P.R. Betterments, Construction, Etc.

Algonquin Hotel, St. Andrews, N.B.—Surveys are being made for the enlargement of this hotel.

Sherbrooke Improvements. — Additional land has been purchased in Sherbrooke, Que., in connection with the plans for improvement which the officials are working out. A new station and freight sheds, and a rearranged yard are proposed.

Reported New Quebec Extensions.—In connection with the reported purchase of the control of the Quebec Ry., Light and Power Co., press reports credit the company with being about to undertake an extensive programme of development throughout the northern and northeastern parts of the province. The plan suggested is a line through Labrador, carrying the C.P.R. main line to Cap Charles, and involving the construction of about 1,000 miles of railway. Sir Thos. G. Shaughnessy when shown the report is said to have remarked that it was a very ingenious scheme, and could only have originated in Quebec.

Place Viger Hotel, Montreal.—Plans are said to be under consideration for an enlargement of this hotel.

Westmount Improvements.—Transfers have been registered showing that the C.P.R. has acquired, through the Ontario and Quebec Ry., a leased line, about 150,000 sq. ft. of land in Westmount and St. Henri ward, Montreal, from the Mackay estate, for $111,000. This property adjoins other land recently acquired by the company and has been purchased for the purpose of giving access to the Glen yards.

At the meeting of the Westmount Town Council, Feb. 4, D. McNicoll, Vice-President, stated that it was the company's intention to erect a new station at the bend of Victoria Avenue.

Montreal City Ticket Office.—The C.P.R. has purchased the St. Lawrence Hall Hotel property from the Hogan estate, and it is reported it will be taken down and that a new block of buildings will be erected thereon, in which will be located the city ticket office, telegraph offices, Dominion Express Co. town office, etc.

Northern Colonization Ry.—A deputation from Nominique, Que., waited on the President, Jan. 29, asking that the branch line serving that district be extended 30 miles further. Sir Thos. G. Shaughnessy said that the line would be built and put in operation within a couple of years if the Provincial Government would give a land grant of 4,000 acres a mile.

Second Track Work.—A contract has been let to the Toronto Construction Co. to construct a second track from Finch to Smith's Falls, Ont., a distance of about 50 miles. Construction will be started at once at the west end, and it is expected that the work will be completed this season. The work will be in charge of A. Fronhoefer, Assistant Engineer.

Bridge Improvements at Peterborough.—The company has applied to the Board of Railway Commissioners to vary an order requiring it to leave an opening of 63 ft. in the trestle bridge carrying its branch line to Dickson's Mills in Peterborough, and permitting it to fill in the opening and substitute a solid embankment for the trestle. The matter was adjourned to permit the Dominion Government, the C.P.R., and the Cereal Co., who are interested, to discuss the matter and reach an agreement.

Walkerton and Lucknow Ry.—A deputation from Tiverton waited on J. W. Leonard, Assistant General Manager Eastern Lines, recently, and urged the extension of the line from Walkerton to Lake Huron, Inverhuron or Baie-de-dore being suggested as suitable points for a harbor. One of the company's construction engineers has been directed to make a survey of the route.

Proposed Shops at London, Ont.—The company has bonded about 100 acres of the Platt estate at the north end of West London, Ont., bordering its line, and it is stated that it is intended to construct car repair shops there. We have been advised that it is not the intention to erect shops there.

Temiscamingue to Fort Temiskaming.—The C.P.R. branch from Mattawa, Ont., running along the east bank of the Ottawa River now terminates at Temiscamingue, Que., at which point navigation on Lake Temiskaming begins. There is a charter giving the company power to extend this line, and it is reported that the surveys have been completed for the work. It is said that it is proposed to make an extension on the Quebec side of the river to Fort Temiskaming, about 50 miles; to construct a bridge to the Ontario side, and continue the line to Cobalt, Ont.

Western Lines Construction.—The programme of construction, etc., for the current year includes in addition to the second track work between Fort William and Winnipeg, the following: Continuation of Pheasant Hills branch to connect with the branch easterly from Wetaskiwin, Alta. Completion of the Wolseley-Reston line. Completion of the Weyburn-Stoughton branch. Construction of 50 miles further on the line northerly from Moose Jaw, Sask. Extension from Sheho to connect with the Pheasant Hills branch. Grade reduction Medicine Hat section. Grade reduction Lethbridge to McLeod, including bridge one mile in length and 280 ft. high. Grade reduction between Field and Hector, B.C. Changing 331 miles of light steel for 80-lb. rails. New station at Port Arthur, Ont.; recreation and lodging building for engineers at Ignace, Ont.; making Higgins Ave. subway, Winnipeg, available for second track, and completion of the Victoria Hotel. These works are in addition to the general work of maintenance on the line, and the work of replacing temporary structures with permanent ones. We have been advised that it is intended to proceed with the construction of the several lines mentioned as soon as the weather conditions will permit. The contracts will be let for grading, etc., and the company will lay the steel.

Calgary Station.—The plans for the proposed new station at Calgary, Alta., are being prepared at Montreal, and details are not available. Press reports state that the new building will cost $200,000.

Subways at Calgary.—The question of the construction of subways at Calgary, Alta., is still the subject of negotiations between the company and the City Council. The Board of Railway Commissioners had the matter before them in Sept. last, and subsequently an agreement was reached. A draft order was submitted for approval in Oct., but this was not completed. The City Council discussed the matter Jan. 30, and the question was further discussed with the Second Vice-President at a subsequent date.

Edmonton Entrance.—The question of the entrance of the C.P.R. into Edmonton, Alta., was discussed Feb. 10, by W. Whyte, Second Vice-President; General Superintendent Jamieson and N. E. Brooks, Division Engineer, and the City Commissioners. The Commissioners state that they are confident that a solution of the whole question will shortly be arrived at.

Belly River Bridge.—We have been officially advised that at present the C.P.R. bridge engineers are only making a study of the projected bridge over the Belly River, Lethbridge, Alta. The bridge will likely be designed as a steel trestle; it will be approximately 5,400 ft. long, and will average about 280 ft. in height.

Bridge at Revelstoke, B.C.—The question the reconstruction of the bridge across the Columbia River at Revelstoke, B.C, is under consideration, but we were advised recently that no appropriation had been made for the work.

Kootenay Central Ry.—Progress is being made by the C.P.R. with the construction of this line from Golden, B.C. Labor is very scarce, and considerable trouble has been experienced with the frost.

B, C. Hotels.—J. P. O'Leary, who has succeeded F. M. Rattenbury as architect for the company's hotels in British Columbia, stated at Vancouver recently that it was proposed to add 52 bedrooms and 42 bathrooms to the hotel at Lake Louise; to construct three new wings at the Banff Hotel, practically doubling its capacity, and to take in hand at once the rebuilding of the old wing of the Hotel Vancouver at the corner of Georgia and Granville streets, Vancouver. The Empress Hotel at Victoria is expected to be opened in July.

The Newfoundland Government has submitted to the Legislature a proposition to establish a line of trans-Atlantic steamers between Green Bay on the east coast of Newfoundland and a port on the west coast of Ireland. It is proposed to give a subsidy of $75,000 a year for 25 years. The proposal involves the construction of a tunnel under the Straits of Belle Isle.

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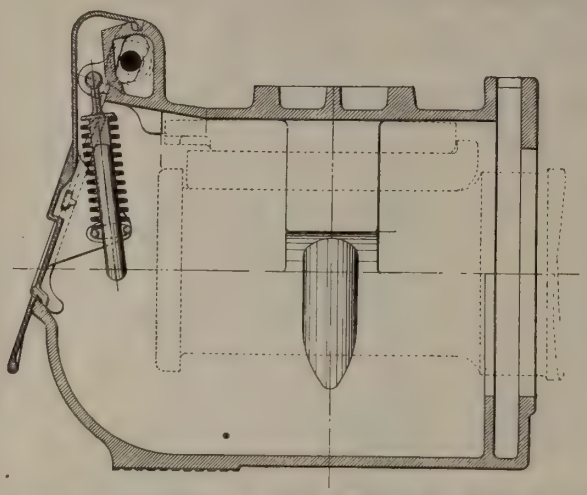

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The Toronto Transportation Club.

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ADVERTISING COPY should reach the office by the 10th of the month preceding the date of publication if proof is required, or by the 15th if proof not wanted.

TORONTO, CANADA, MARCH, 1907.

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THE RAILWAY AND MARINE WORLD is especially adapted for the publication of professional cards of engineers, inspectors, analysts, electrical experts, naval, grain elevator and other architects, solicitors, etc., who desire to bring themselves under the notice of the managements and officials of the various steam and electric railway, steamship, grain elevator, telegraph, telephone and power companies throughout Canada, as well as the locomotive, car and shipbuilders, contractors and promoters of railway enterprises. THE RAILWAY AND MARINE WORLD is the only one medium through which all these important classes can be reached.

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.27		.54	.75	"	1.56	.27	.25	"	.25	"	.77	2,370.00
.30		.60	.75	"	1.65	.30	.25	"	.25	"	.80	2,550.00
.35		.70	.75	"	1.80	.35	.25	"	.25	"	.85	2,850.00
.50		1.00	.75	"	2.25	.50	.25	"	.25	"	1.00	3,750.00

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Canadian Pacific Ry. Appointments.

The following appointments have been made in addition to those given on pg. 177.

J. G. Sullivan, formerly Division Engineer of Construction, C.P.R. Western Lines, and since then of the Panama Canal engineering staff, has been appointed Manager of Construction, C.P.R. Eastern Lines. Office. Toronto. Division engineers of construction will report to him.

Circulars have been issued confirming the following appointments as announced in our Feb. issue, pg. 103.

G. J. Bury, heretofore General Superintendent Central Division, has been appointed Assistant General Manager, Western Lines, in charge of matters relating to maintenance of way and operation. Office, Winnipeg.

A. Price, heretofore Superintendent of Transportation Western Lines, has been appointed General Superintendent, Central Division. Office, Winnipeg. The position of Superintendent of Transportation has been abolished.

F. F. Busteed, heretofore Assistant Chief Engineer, Western Lines, has been appointed General Superintendent, Pacific Division. Office, Vancouver, B.C.

R. Marpole has been appointed General Executive Assistant for British Columbia, with office at Vancouver. All legislative work, extraordinary litigation and claims affecting the company's interest in the Province will come under his supervision. He will have charge of the company's property interests in Vancouver, Kamloops, Revelstoke, and such other points in British Columbia as may be hereafter designated, and all applications for leases or agreements with reference to these properties shall be submitted to him for approval. He will have supervision of exploration, surveys, and the construction of new lines in the Province. The General Superintendent of the Pacific Division will issue transportation to local employes, and members of their families over his own division only. All other free transportation will be dealt with by the General Executive Assistant. He will perform such other duties as may be assigned to him by the executive from time to time

Buffalo and Lake Huron Railway Co.

Following is the report for the half-year ended Dec. 31, 1906, to be presented at the annual meeting at Liverpool, Eng., Mar. 6. After providing for interest on first and second mortgage bonds, the available balance, including the amount brought forward from the previous half-year, will be £14,490 4s. 7d., which will enable the directors to pay the usual dividend of 5s. 3d. per share, and leave a balance of £705 11s. 1d. to be carried forward as against £637 3s. 9d. The directors' remuneration was many years ago fixed at £900 a year. But since 1875, as the board has consisted of three members only, the amount drawn has been £300. In view of the altered conditions of the company, the directors will, subject to the approval of the shareholders, draw for their remuneration, as from Jan. 1, 1907, £400 instead of £300 a year.

BALANCE SHEET, DEC. 31, 1906.

	£	s.	d.
Share capital: 52,513 ordinary shares of £10 each, fully paid.	525,130	0	0
Bonded debt:			
First mortgage 5½% £100 bonds..... $297,600			
Sec'd mortgage 5½% £100 bonds..... 466,158			
	763,758	0	0
Interest on bonds accrued from Sept. 1 to Dec. 31.....	14,002	4	8
Dividends unclaimed.....	1,028	6	6
Interest unclaimed.....	3,617	7	5
Sundry creditors.....	1,926	12	3
Balance from Revenue Account.	14,490	4	7
	£1,323,952	15	5

	£	s.	d.
Cost of property on transfer of undertaking to G.T.R. Co. on lease, after deducting expenses in connection with transfer.....	1,278,882	10	5
Investments: Nominal Amount.			
Buffalo & Lake Huron Ry. Co. 5½% first mortgage bds. £ 600 0 0			
5½% second mortgage bonds..... 11,866 13 4			
Three shares..... 30 0 0			
Bond scrip and share fractions.... 27 16 0			
G.T.R. 4% consolidated debenture stock..... 660 0 0			
£13,184 9 4			
Cost price.....	7,766	13	2
Cash at bankers.....	2,303	11	10
Rental to Dec. 31, 1906, due from G.T.R. Co., payable Mar. 1, 1907.	35,000	0	0
	£1,323,952	15	5

REVENUE ACCOUNT FOR HALF-YEAR ENDED DECEMBER 31, 1906.

	£	s.	d.
Balance as shown in last half-year's report..... £14,421 17 0			
Less 72nd dividend on share capital, at 5s. 3d. a share..... 13,784 13 3			
	637	3	9
Interest on investments.....	371	2	4
Interest on deposit at bank.....	23	19	0
Rental to Dec. 31, 1906, payable by the G.T.R. Co., Mar. 1, 1907.....	35,000	0	0
	£36,032	5	1

	£	s.	d.
Interest payable as under:			
5½% on £297,600 1st mortgage bds. £8,184 0 0			
5½% on £466,158 2nd mortgage bds. 12,819 6 11			
	21,003	6	11
London office rent and management expenses..... £350 0 0			
Directors' remuneration..... 150 0 0			
Miscellaneous expen's 17 13 7			
Auditors' fee..... 21 0 0			
	538	13	7
Balance available for dividend.....	14,490	4	7
	£36,032	5	1

The directors for the current year are M. H. Maxwell, Chairman; J. M. Sing, and E. Ashton, all of Liverpool, Eng.

Mr. Emmerson on the Intercolonial Ry.

The Minister of Railways in speaking on the Intercolonial Ry. at the Canadian Club, Toronto, Feb. 11, said there were railway companies in Canada which would think they were getting the I.C.R. cheaply if the Government would sell to them for $100,000,000. If the rates charged on it were brought up to the level of those charged by other railways in Canada, its earnings would be increased by 50%, and instead of a surplus of $100,000 there would have been a surplus of $2,300,000, sufficient to pay interest on the capital expended upon its construction and leave $100,000 by way of dividends. The management, he claimed, was most economical, and the present splendid showing was made in the face of the cold fact that the tolls charged on the I.C.R. were the lowest in the world. The manufacturers and farmers of Ontario had benefited by the cheap transportation the line afforded. Its past deficits represented surpluses in the pockets of the people. Canada had spent millions in canals and railway and steamship subsidies without a murmur. These would give no capital return whatever, but the Government was criticized because returns were not made upon the expenditure upon the Intercolonial Ry. He was prepared to defend the system with the full sense that such a defence was amply justified. In conclusion he said the total railway tolls collected in Canada last year had been $125,000,000, of which but $7,500,000 had been collected by the Government railway, the balance had gone to the corporations. This was but a form of taxation and it was well not to forget its relations to other imports. The people of Canada were paying but $8 a head in customs duties, while the transportation tax amounted to over $20. The former affected but few commodities, but there were scarcely any articles entering into general consumption, the cost of which was not directly affected by transportation rates.

The Dominion Government str. Aberdeen has been equipped with the Submarine Signal Co's submarine bell signal.

G. Cooper has been appointed road foreman of locomotives, G.T.R., with headquarters at Sarnia Tunnel, vice G. Renton, deceased.

The Judicial Committee of the Privy Council has given judgment in the case of the C.P.R. appeal against the decision of the Supreme Court regarding the taxation of its land grant in Manitoba, Saskatchewan, and Alberta. The Manitoba and the Supreme Courts decided that the lands in question could be taxed within the 20-year period specified in the charter, and this decision has now been reversed.

In the appeal to the Judicial Committee of the Privy Council arising out of the collision between the S.S. Albano and the Allan Liner Parisian, the court set aside the decrees of the Supreme Court and the local judge in Admiralty at Halifax, and found that the Parisian was alone to blame. The case against the Albano was dismissed with costs, and a verdict was given in the cross action in favor of the Albano, the damages to be found by reference in the usual way.

The Prince Rupert's Timber and Lumber Co. has been incorporated under the Dominion Companies' Acts, with a capital of $450,000 and offices at Ottawa, to carry on a lumber business, and in connection therewith to own and operate steam and other vessels; to construct docks, wharves, piers, warehouses, elevators, etc. The provisional directors are: E. H. Moore, W Anderson, G. H. Rochester, W. W. Dwyer, R. E. McCracken, A. Fleck, Ottawa; J. H. Sanderson, F. C. Baker, A. H. Woodman, Prince Albert, Sask.; J. H. Lamont, Regina, Sask.

The Ontario Railway and Municipal Board handed out a lengthened judgment as to its recent enquiry into the condition of the Hamilton Street Railway The Board makes extensive orders as to repairs, etc., which must be made within the six months from April 1, directs the City Council to make certain alterations to street crossings, and to repair the track where it has become disarranged by reason of the street repair and other corporation works, and orders that the city pay one-half of the engineer's cost of the report to the Board.

ELECTRIC RAILWAYS.

Guelph Radial Railway Co.

The annual report for the year ended Sept. 30, 1906, of this company, the stock of which is owned by the city of Guelph, Ont., contains the following figures:

ASSETS.

Cash in bank.....	$ 9,632.57	
Cash on hand.....	30.00	
		$9,662.57
Accounts receivable.....		443.48
Construction and equipm't	100,258.37	
New car barn.....	226.82	
Cemetery extension.....	36.19	
New equipment.....	2,448.11	
Feeder, Edinboro' Rd.....	333.12	
Park.....	606.81	
Rink.....	506.71	
Toboggan slide.....	614.23	
Coal siding.....	32.00	
Elora road turnout.....	613.30	
Real estate.....	753.15	
		106,428.81
Stock, rails, wire, etc., for switches.....		1,085.39
Stock on hand.....		1,043.30
Insurance unexpired.....		118.12
Total assets.....		$118,781.67
LIABILITIES: Accounts payable.....		1,976.27
Net assets.....		$116,805.40

FREDERIC B. STEVENS

MANUFACTURER

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HIGHWAY CROSSING SIGNALS FOR STEAM ROADS

FOR FURTHER INFORMATION WRITE GENERAL OFFICE

143 EAST 3rd STREET, - ST. PAUL, MINN.

BRANCHES: NEW YORK CHICAGO

Capital stock		$108,000.00
Profit and loss at debit, Sept. 30, 1905	$ 463.09	
Gain, as at Sept. 30, 1906.	7,487.28	
	$7,024.19	
Premium account	1,781.21	
		8,805.40
		$116,806.40

EARNINGS.

Passengers	$ 25,906.43
Freight	1,513.33
Advertising	375.00
Rent of hotel, Puslinch Lake	171.69
Rent of power	178.00
Park receipts	202.50
Bank interest	156.95
Sundry expenses	5.75
	$28,509.65

EXPENSES.

Car barn maintenance	$ 2,827.74	
Track maintenance	1,240.35	
Line maintenance	336.30	
Power house maintenance	1,461.53	
Passenger operating, wages.	6,953.34	
Freight operating	369.89	
Freight charges paid	52.40	
Oil	198.36	
Coal	2,647.46	
G.T.R. crossing	340.76	
Painting and upholstering cars	116.49	
Office and salaries	1,330.00	
Stationery	198.20	
General expenses	92.05	
Legal	51.06	
Audit	120.00	
Taxes	120.00	
Insurance	342.28	
Park	548.23	
Band	415.50	
Battery	56.24	
Rink expenses	350.85	
		$20,169.03
Net gain on year's operations		$8,340.62
Accident claims, 1905	$282.52	
Legal and other expenses re crossing G. & G. Ry	570.82	
		853.34
Balance		$7,487.28

During the year the capital account was increased $6,170.44 for real estate, park, cars, turnout, new car barn, toboggan slide, rink, etc. The passenger receipts increased $3,596.80 over the previous year. The number of passengers carried was 616,046, an increase of 90,434 over 1905. Out of the net gain of $7,487.28 on the year's operations, $463.09 was paid for the deficits of the two previous years, and a dividend of 4½% on the city's holdings in the company, $108,000 was paid, amounting to $4,860.

Halifax Electric Tramway Company.

Following is the report for the year 1906 presented at the annual meeting Feb. 11:

The net earnings, $141,808.52, show an increase over any previous year. Four quarterly dividends at the rate of 6% per annum have been paid, amounting to $81,000.00.

An unusually large expenditure was made during the year for double tracking, rolling stock and car house, also in street paving ordered by the city, the result being not only a more efficient car service, but a material reduction in the percentage of the cost of operation. The expenditures were as follows: Street paving, $48,000.00; double tracking and extension, $29,906.30; rolling stock, $19,914.14; meters, transformers and arc lamps, $11,529.90; new car house (not quite complete), $12,769.90; a total of $122,120.24; a part of which expenditure has been provided for out of the earnings of the past year. The expenditures for the current year are expected to be comparatively small. The percentage of operating expenses to income shows the gratifying result of 55.68%, the lowest for the past six years.

ASSETS.

Property	$2,276,918.58
Accounts receivable	34,245.31
Supplies	17,696.79
Suspense account	9,994.99
Cash on hand	24,938.55
	$2,363,794.22

LIABILITIES.

Capital stock	$1,350,000.00
5% bonds	600,000.00
Accounts payable	40,195.66
Notes payable	85,000.00
Bond interest	15,000.00
Dividend due Jan., 1907	20,250.00
Tickets outstanding	1,295.23
Surplus account	252,053.33
	$2,363,794.22

INCOME ACCOUNT.

Passenger receipts	$ 168,091.37
Light and power earnings	162,077.77
Gas earnings	56,578.36
Sundry earnings	770.39
	$ 387,517.89
Operating expenses	$ 215,709.37
Coupons	30,000.00
Net earnings	141,808.52
	$ 387,517.89

STATISTICAL STATEMENT.

Railway earnings	$ 168,781.41
Electric light and power earnings	162,158.12
Gas and products earnings	56,578.36
Total earnings	387,517.89
Operating expenses	215,709.37
Bond interest	30,000.00
Net earnings	141,808.52
Dividends paid and interest	84,910.16
Surplus	56,898.36
Per cent. operating expenses to income	55.68%
Passengers carried	3,783,801
Car mileage	760,559
Incandescent lamps	42,877
Arc lamps	362
Stationary motors, h.p.	820

Port Arthur Electric Railway.

Following is the financial statement of the Port Arthur, Ont., town electric railway department from Jan. 1 to Dec. 15, 1906:

INCOME.

Fares	$47,024.90	
Tickets	11,536.50	
Special trips	210.25	
Advertising in cars	215.25	
Railway power	1,779.59	
		$60,766.49
Accounts due for power		878.68
Stock on hand Dec. 15, 1906.	4,117.81	
" " " Dec. 31, 1905.	2,040.67	
		2,077.14
		$63,722.31

EXPENDITURE

Superintendent's salary	$1,650.00	
Superintendent's clerk salary.	325.00	
Secretary-Treasurer and clerical staff proportion	977.50	
Auditor's salary proportion,	150.00	
		$3,102.50
Proportion rent town office		176.00
POWER HOUSE—		
Salaries	$1,982.50	
Supplies	189.80	
Repairs	377.38	
Expense	28.00	
Water power expense	1,138.65	
Current river dam 1 repairs	351.52	
Estimated half month to Dec. 15	170.00	
	$4,237.85	
Less amount charged to electric light department	2,825.25	
		1,412.60
Fuel		274.00
CAR BARN AND CARS—		
Conductors' and motormen's wages	$11,166.83	
Conductors' and motormen's bonus	77.59	
Car repairs and supplies	5,654.36	
Car barn and railway supplies	145.36	
Car barn, fuel, light and water	137.08	
Motor repairs	303.50	
Estimated half month to Dec. 15	794.76	
		18,279.48
TRACK AND LINE—		
Track repairs and supplies	5,175.59	
Line repairs	1 813.77	
Storage battery expense	20.60	
Insurance	1,039.97	
Rent, real estate	63.00	
Accidents	219.25	
Printing, advertising and stationery	299.14	
Expense	1.046.53	
Advertising in cars	25.25	
Tools	23.10	
Estimated half month to Dec. 15	442.10	
		10,168.30
Debentures, principal and interest		6,867.98
Depreciation account, 5%		3,038.32
Balance gain		20,403.13
		$63,722.31

EXPENDITURE ON CAPITAL ACCOUNT, 1906

Current River development	$ 3,322.74
" " dams	21,246.32
Car equipments	207.19
Track construction	461.38
Car 22	4,531.71
Car 8	1,678.19
Car barn addition	337.29
Line construction	5,377.26
Car construction	92.00
Office furniture	171.32
Poles	465.70
Extension power plant	8,752.69
Power flume	10,450.00
Park improvements	2,591.70
Storage battery	169.50
	$59,854.99

Winnipeg Electric Railway Company.

Following are the financial and other statements for the year 1906:

ASSETS.

Cost of property.—Street railway, buildings, plant and equipment; electric lighting plant and equipment; electric power plant and equipment; gas buildings, plant and equipment; water power plant and equipment		$10,654,758.77
Stores		111,954.80
Accounts receivable		146,871.87
Cash on hand		8,735.83
Conductors' working fund		3,900.00
Winnipeg, Selkirk and Lake Winnipeg Ry. Co		510,394.26
		$11,436,615.53

LIABILITIES.

Capital stock		$4,375,200 00
Bonds, 5% payable Jan. 1, 1927	$1,000,000	
Bonds, 5% payable Jan. 2, 1935	4,000,000	
W. S. & L. W. bonds, interest and payment guaranteed	400,000	
		5,400,000.00
Accounts payable	$228,476.16	
Wages for December	20,701.10	
Interest on bonds paid Jan. 2, 1907	125,000.00	
		374,177.26
Car license due Feb. 1, 1907	2,200.00	
City percentage due Feb. 1, 1907	36,455.55	
		38,655.55
Unredeemed tickets		4,980.93
Bank of Montreal		334,912.80
Suspense		147,150.26
		$10,675,076.80
Surplus		761,538.73
		$11,436,615.53

REVENUE AND EXPENDITURE.

Gross earnings for year	$1,416,305.04	
Gross expenses for year.	701,963.72	
Net earnings for year		$ 714,341.32
Fixed charges	251,037.27	
Dividends	248,668.81	
		499,706.08
Surplus for year		$214,635.24

PROFIT AND LOSS ACCOUNT.

Balance at credit, Dec. 31, 1905	$546,052.98
Net earnings, 1906	214,635.24
Miscellaneous earnings	850.51
Balance at credit, Dec. 31, 1906	$761,538.73

STATISTICAL STATEMENT.

	1906	1905
Gross receipts	$1,416,305.04	$1,119,768.85
Operating expenses	$ 701,963.72	$ 575,747.29
Operating expenses, per cent. of earnings	49.56	51.42
Net earnings	$ 714,341 32	$ 544,021.56
Net income per cent. of capital	11.17	9.86
Passengers carried	17,229.554	13,081,249
Transfers	3,109,094	1,682,685
Railway earnings per capita, on basis of 90,000, as against 80,000	8.30	6.80

The officers and directors for the current year are: President, W. Mackenzie; Vice-President, W. Whyte; Secretary-Treasurer, F. Morton Morse; other directors: Sir Wm. C. Van Horne, D B. Hanna, R. J. Mackenzie, D. D. Mann, A. M. Nanton, H. Sutherland.

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Ottawa Electric Railway Co.

The report for the year 1906, presented at the annual meeting, Jan. 28, showed gross earnings of $525,746.59, against $449,633.97 for 1905; and net earnings of $218,258.90, against $173,693.54. After providing for interest on bonds and loans, the net earnings show over 18% earned on the capital stock. In 1906, 11,408,422 passengers were carried, against 9,891,311 in 1905. The track renewals recommended in the 1905 report have been completed, and in addition heavy rails have been laid on other portions of the lines. The tracks on Sussex St. and Gladstone Ave. will be relaid with heavy rails this year. A number of closed and open cars were added to the equipment, and additional cars have been ordered to meet the demands of increasing traffic. The popularity of the company's park at Britannia-on-the-Bay was further demonstrated during 1906. It is intended to pave the promenade of the main pier with asphalt or bitulithic, and to extend its outer end 150 ft. The property is all in excellent condition, and the directors confidently look forward to the continued satisfactory development of the business.

The officers and directors were re-elected for the current year as follows: President, T. Ahearn; Vice-President, P. Whelen; other directors, Hon. G. A. Cox, W. Y. Soper, G. P. Brophy, T. Workman; Sec.-Treas., J. D. Fraser.

ASSETS.

Roadbed and equipment, water power property and plant, real estate and buildings	$1,923,030.31
Stores	3,590.38
Accounts receivable	612.50
Cash	4,314.51
	$1,931,547.70

LIABILITIES.

Capital stock	$ 998,200.00
First mortgage bonds	500,000.00
Dividend payable Jan. 1, 1907	59,742.00
Interest on bonds, payable Jan. 5, 1907	10,000.00
Unpaid dividends	390.67
Pay list to Dec. 31, 1906	9,326.12
Sovereign Bank of Canada	121,276.34
Accounts payable	2,048.11
Contingent account	31,000.00
Profit and loss	199,564.46
	$1,931,547.70

PROFIT AND LOSS.

Balance at credit, Dec. 31, 1905	$169,280.20
Net profit for year 1906	218,258.90
	$387,539.10
Dividend paid April 1, 1906, 2%	$19,864.00
Dividend paid July 1, 1906, 2%	19,880.00
Dividend paid Oct. 1, 1906, 2%	19,914.00
Dividend payable Jan. 1, 1907, 2% and bonus of 4%	59,742.00
Interest on bonds and loans	26,443.35
Mileage payments	11,131.29
Contingent account	31,000.00
Balance at credit of profit and loss, Dec. 31, 1906	199,564.46
	$387,539.10

The Lieutenant-Governor of Alberta, in his speech at the opening of the Legislature, Jan. 24, said the increased activity in railway construction makes it imperative that provision be made for a uniform law governing railways within the province.

The North Atlantic Dock and Shipbuilding Co. has been incorporated under the Dominion Companies' Act, with a capital of $1,500,000 and offices at Montreal, to construct vessels of all kinds; to carry on a general navigation business anywhere in Canada; to construct dry docks, wharves, piers, warehouses, etc; to make contracts with the British and Colonial Governments; to amalgamate with other similar companies, and various other purposes incidental to a shipbuilding and ship-owning corporation. The provisional directors are: A. C. Ross, C. B. Ross, North Sydney, N.S.; T. Brosseau, K.C.; B. Brosseau, Montreal; W. H. Moore, Toronto.

Montreal and Toronto Street Railways.

Following is a comparative statement of the Montreal St. Ry. and the Toronto Ry.'s operations for the past year:

	Montreal.	Toronto.
Gross	$ 3,100,486	$ 3,100,739
Operating expenses	1,850,719	1,646,555
Per cent. expenses to gr.	59.69	52.94
Net	1,249,766	1,463,224
Net income p.c. of capital	17.00	20.90
Fixed charges	163,599	217,199
Dividends	700,000	460,241
Surplus	524,770	1,970,653
City p.c.	178,408	348 963
Passengers carried	76,356,099	76,106,932
Transfers	24,516,067	28,159,558
Total passengers carried	100,872,166	104,266,490

Dominion Power and Transmission Co.

A company with this title was incorporated under the Dominion Companies' Act Jan. 22, the incorporators being employes of a Toronto law firm, with a capital of $25,000,000 and offices at Toronto, to acquire water powers, to develop electrical power, to distribute the same, to develop and distribute steam, hydraulic, pneumatic or other power, to acquire the businesses of companies engaged in any similar business, or the stocks and bonds of the same; to operate tramways, etc., telegraph and telephone lines, and to carry on in connection therewith a variety of other allied businesses.

At the annual meeting of the Hamilton Cataract Power, Light and Traction Co., Feb. 11, it was announced that an arrangement had been made by which the shares of this company would be taken over by the D.P. and T. Co. Of the authorized capital of $5,000,000 there had been issued $4,700,000. A controlling interest had already been turned over to the new company and the balance of the stock would likely be transferred in the near future. The H.C.P., L. and T. Co. will continue in existence as an operating company. The stock of the new company is divided into three classes—preferred, limited preferred, and common. The preference stock, by the terms of the Dominion company's charter, will pay dividends for three years at 6%, and afterwards at 7% per annum. The limited preferred stock will be preferred stock for five years only, after which it will become common stock. The preferred stock of the Cataract company was taken over by the new company on an equal basis. For every share of Cataract common three shares of limited preferred were given by the Dominion company. The H.C.P., L. and T. Co. own the Hamilton Radial Ry., the Hamilton and Dundas Ry., a control of the Hamilton, Grimsby and Beamsville Electric Ry., the Hamilton Terminal Station Co., certain stock of the Hamilton Street Ry., as well as the Brantford and Hamilton Ry. now under construction, in addition to the electric light and power plants. It is stated that the new company will not take over the Hamilton Street Ry. stock, but that it will continue to be operated as a separate concern. There is, however, a desire on the part of the city to purchase the street railway, and the principal shareholders are prepared to sell at a reasonable price.

The report presented at the annual meeting of the H.C.P., L. and T. Co. showed that the gross earnings for the year from the power and light, traction companies and other sources, were $1,039,341.87, and the surplus carried to profit and loss was $259,412.82. The balance on hand was $262,512.02. During the year two dividends on preferred stock had been paid, amounting to $166,969.75, and on common stock two dividends amounting to $56,000. A final statement was submitted, showing assets of $9,255,350.

EARNINGS AND EXPENDITURES.

Gross earnings, power and light		$623,502.10
Gross earnings, traction companies		404,626.70
Gross earnings, other sources		11,213.07
Operating expenses	$376,255.71	
Maintenance	107,141.12	
General expense	100,743.21	
Bond interest	165,132.75	
Mileage and percentage	28,547.53	
Sundries	2,108.73	
Surplus to profit and loss	259,412.82	
	$1,039,341.87	$1,039,341.87

PROFIT AND LOSS ACCOUNT.

Balance from 1905		$233,094.64
Surplus earnings and expenditures, 1906		259,412.82
Sinking funds, H. and D. bonds returned		2,622.29
Adjustment	$ 14,647.98	
Preference dividend 14	79,906.75	
Preference dividend 15	87,063.00	
Common dividend 3	25,500.00	
Common dividend 4	25,500.00	
Balance	262,512.02	
	$495,129.75	$495,129.75

ASSETS.

Investment		$8,857,883.52
Supplies on hand		77,651.78
Insurance unexpired		4,257.82
Accounts and bills receivable		112,706.96
Customers' accounts due, but not collected		124,148.64
Cash on hand		7,344.05
Trustees of bonds		6,272.55
Suspense accounts		14,075.13
Cataract syndicate securities		51,009.68
		$9,255,350.13

LIABILITIES.

Capital stock, preferred		$2,909,600.00
Capital stock, common		1,700,000.00
Bonded debt		3,787,550.00
H.C.P.L. & T. Co.	$2,132,000.00	
H.E.L. & C.P. Co., originally $1,100,000.00	1,080,000.00	
Hamilton Street Railway Co.	500,000.00	
Lincoln E. L. & P. Co., originally $75,000.00	67,000.00	
Mortgages	8,550.00	
Bills payable		250,000.00
Accounts payable		81,474.84
Accrued bond interest		46,997.30
Accrued track rental, etc.		21,606.31
Due bank		82,766.66
Dividends unpaid		112,843.00
Profit and loss		262,512.02
		$9,255,350.13

Projects, Construction and Betterments.

Calgary, Alta., Street Ry.—The Public Works Committee has recommended that the City Council take steps to construct an electric street railway 12 miles long and equip the same with 12 cars. The line it is proposed shall extend from one end of the city to the other with a loop from Main St. each way in the centre of the city.

Chatham, Wallaceburg and Lake Erie Ry.—It is reported in Chatham, Ont., that arrangements have been made for the financing of the construction of the line to Lake Erie, and that work will be started on an early date.

Fort William, Ont.—Plans have been filed with the Ontario Railway and Municipal Board for the construction of a street railway in Fort William by the Town Council as a municipal enterprise.

Hamilton, Grimsby and Beamsville Electric Ry.—Application is being made at the current session of the Ontario Legislature for an act extending the time for the construction of the extension of the line from Beamsville to St. Catharines, thence to Niagara-on-the-Lake and Niagara Falls, Ont.; for special powers in connection with the construction of a bridge over the old Welland Canal at St. Catharines; for power to enter into agreements with other companies, and to issue additional bonds and other securities.

Hamilton Radial Ry.—The President of the Hamilton Cataract Power, Light and Traction Co., which owns the H.R.Ry., recently stated that it was the company's intention to proceed with the construction of the extension from Oakville to Toronto, as soon as possible, possibly early in the spring. (Feb. pg. 113).

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Manitoba Radial Ry.—C. Hoffman, A. Wagner, R. D. Fletcher, J. A. Munro, and W. J. Donovan, are the provisional directors named in the act which the Dominion Parliament is being asked to pass at its current session with this title. The promoters ask power to construct a railway from Winnipeg westerly and northerly to Lake Manitoba; thence northerly to Sundar, with a branch through Stonewall to Lake Francis. The company desires to have authority to use steam, electricity, gasoline or other motive power. The city of Winnipeg is opposing the measure with a view to have a clause inserted making it necessary for the company to secure the consent of the municipalities through which the line will pass before construction is started. (Feb., pg. 113).

Montreal Street Ry.—Negotiations are approaching the final stage with the City Council for the construction of a number of additional lines in the city.

Niagara, St. Catharines and Toronto Ry.—The extension from Thorold to Fonthill, Ont., about six miles, is expected to be opened for traffic early in March. Work will be commenced at an early date upon the extension of the line from Fonthill to Welland, about four miles, and it is expected to have the line completed about the middle of June. We were advised Feb. 18, that the company's plans as to further extensions were not definitely settled. Press reports credited the company with being about to construct a line from Welland to Port Colborne, about seven miles, and from St. Catharines to Niagara-on-the-Lake. It was also stated that the company was considering the construction of a line from Lundy's Lane to the Ferry Landing or Fort Erie, Ont.

Plans have been filed at St. Catharines showing a projected extension from that city to Vorget, near Niagara-on-the-Lake. (Feb., pg. 113).

Ontario Interurban Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title to construct a railway from Belleville, across the Bay of Quinte to Ameliasburg, thence to Wellington and Picton, with a branch to Consecon and Willars Bay; and along the beach between Wellington and West Point. Power is being asked to operate the line either by steam or electricity, to construct telegraph and telephone lines, to construct wharves, elevators, storehouses, etc. W. G. McWilliams, Toronto, is solicitor for the applicants.

Ottawa Electric Ry.—A plan has been deposited with the Minister of Public Works at Ottawa, showing the proposed addition to the company's pier at Britannia-on-the-Bay, and the approval of the Government is to be asked for the carrying out of the work.

The company has notified the city council that it is prepared to construct a line to Beechwood and Notre Dame cemeteries, Ottawa.

Ottawa River Ry.—Application is being made at the current session of the Ontario Legislature for an act authorizing the construction of a branch from Digby tp., through Laxton and Carden tps., to Mara or Thorah tp.; a branch from East Gwillimbury or Whitchurch tp. to the Port Stanley branch at Caledon. An extension of time for the construction of the previously authorized lines is also asked. Hogg and Magee, Ottawa, are solicitors for the applicants.

Owen Sound, Shallow Lake and Wiarton Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title for the purpose of constructing a railway from Owen Sound through the townships of Sarawak, Keppel, and the village of Shallow Lake to Wiarton, Ont. A. D. Creasor, Owen Sound, is solicitor for the applicants.

Silver Bell Electric Ry.—H. D. Graham, B. C. Beach, A. J. Young, C. A. Beach, and A. J. Murphy, are applying at the current session of the Ontario Legislature for an act incorporating a company with this title with power to construct an electric railway in the township of Coleman, Lorraine, Bucke, Dymond, and the towns of Latchford, Cobalt, Haileybury and New Liskeard; with branch lines; to construct telegraph and telephone lines; to acquire docks, wharves, warehouses; to operate steam and other vessels, and to acquire summer resorts and hotels.

Southwestern Traction Co.—The plans for the extension of the lines to Delaware are completed, and construction will be started early in the spring. It is proposed to connect the line now in operation between London and St. Thomas with the Michigan Central Rd. in the latter town.

St. Thomas St. Ry.—The City Engineer of St. Thomas, Ont., has been instructed to prepare estimates for several extensions of lines, and for some double-track construction in the city.

Toronto and York Radial Ry.—A preliminary agreement has been reached with the East Toronto Town Council by which the company will extend its line from the G.T.R. tracks to Luttrel Avenue, the furthest point of the town's northern limit.

Toronto Ry.—The Toronto City Council is discussing plans for new lines which it is proposed to ask the company to construct. The Board of Control has reported favorably on a line on Bay and Teraulay streets to College St.; and the City Engineer has been asked to report on a line along Harbord St. to the western limits of the city.

Toronto Suburban Ry.—The Toronto Junction, Ont., Town Council has under consideration a by-law depriving the company of its charter owing to the failure to operate cars on the tracks laid on certain streets south of Dundas St.

Winnipeg and Lakes Electric Ry.—The Manitoba Legislature has refused to grant a renewal of the charter of the Winnipeg and Lake Shore Ry. Co. under the above title. The recent application was for power to construct an electric railway from Winnipeg to Netley Lake, thence to Winnipeg Beach, and back to the city; and from Winnipeg to Portage la Prairie, then to Lake Winnipeg and back to Winnipeg. The original charter was passed in 1898 and no progress had been made.

Electric Ry. Finance, Meetings, Etc.

Berlin and Waterloo St. Ry.—An appeal has been made to the courts against the decision of the arbitrators in the recent arbitration proceedings in connection with the proposal of the Berlin Town Council to take over the line.

Brantford Street Ry.—The Ontario Legislature is being asked at its current session for an act confirming by-law 742 of the Brantford City Council, and an agreement entered into with the B.S. Ry. Co. in conformity therewith.

The retiring directors have been re-elected, as also were the retiring directors of the Woodstock, Thames Valley and Ingersoll Ry., which is controlled by the same interests.

Cape Breton Electric Co.—Gross earnings for 12 months ended Dec. 31, 1906, $258,416.80, operating expenses, including taxes, $154,472.28; net earnings, $103,944.52; interest charges, $43,160.97; improvement fund, $8,500; 3% dividend preferred stock, $7,020; balance, $45,263.55. The company does the entire electric lighting and electric railway business in Sydney; the entire electric lighting business in North Sydney; the ferry business between Sydney and North Sydney, and operates an interurban line between North Sydney and Sydney Mines. It also owns $200,000 of the $394,000 outstanding first-mortgage bonds and one-half of the common stock of the Sydney and Glace Bay Ry., an interurban electric railway 19 miles long. The company has issued $850,000 of 5% 30 year gold bonds out of its authorized amount of $1,500,000, $234,000 out of an issue of $250,000 of 6% non-cumulative preferred stock, and $1,000,000 of common stock. The figures as to earnings and expenses include one-half of the earnings and expenses of the Sydney and Glace Bay Ry. The Managers of the company are Stone and Webster, Boston, Mass.

Hamilton Cataract Light, Power and Traction Co.—See Dominion Power and Transmission Co.

Halifax Electric Tramway.—Railway earnings for Jan. $12,395.67, against $11,755.69 for Jan., 1906.

Hamilton, Grimsby and Beamsville Ry.—At the annual meeting Jan. 28, it was reported that the gross earnings were $84,300 and the operating expenses about $76,000. The directors said a dividend might be declared in 1908. The proposal to extend the line to St. Catharines was approved and the application will be made to the Ontario Legislature for the necessary powers. The minority shareholders are not satisfied with the position of affairs, and have issued writs asking that the directors be enjoined from proceeding in the matter, and to prevent the transfer of certain shares said to have been illegally issued to the directors and their friends. The directors re-elected are: J. M. Gibson, K.C.; W. C. Hawkins, J. Sutherland, J. Dickenson, J. W. Nesbitt, K.C.; J. G. Gauld, J. R. Moodie. See also Dominion Power and Transmission Co.

London Street Ry.—Following are the officers and directors for the current year: President, H. A. Everett: Vice-President, T. H. Smallman; other directors: W. M. Spencer, P. W. D. Brodrick, C. W. Moore, C. W. Wasson, H. N. Holt; Manager, C. B. King; Secretary-Treasurer, G. H. Benson. The report was not made public, but it is said to have been a satisfactory one, and to show an increase in the number of passengers carried. A committee consisting of the President, W. M. Spencer, and P. W. D. Brodrick, was appointed to meet the committee which the London City Council has appointed to confer in reference to a purchase of the line by the city.

Quebec Ry. Light and Power Co.—It is reported that the C.P.R. has secured the control of this company, but no official announcement has been made.

G. H. Thomson has been elected President, succeeding his father, the late A. Thomson, and W. Price has been elected to fill the vacancy on the directorate.

St. Thomas Street Ry.—Receipts for Jan. $995.71, a decrease of $26.36; passengers carried 37,210, an increase of 720 against Jan., 1906.

Toronto Ry.—The Toronto City Council is applying at the current session of the Ontario Legislature for an act providing, among other things, that the statute relating to the Toronto Ry. be amended so as to provide that the amount payable by the company to the city as liquidated damages in case of the company neglecting or refusing to give a service of cars reasonably complying with the provisions of the agreement and conditions, shall be $500 a day instead of $100 a day.

The Quebec Cartage and Transfer Co. has acquired a site having a frontage of 200 ft. on St. Valier St., Quebec, for the purpose of erecting offices, stables, etc.

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Electric Railway Notes.

The Toronto Ry. is building at its shops 100 convertible motor cars of its standard type, 45 ft. long.

The St. Thomas, Ont., City Council is asking prices for two or three street cars for quick delivery.

P. S. Ross, chartered accountant, Montreal, who died there Feb. 1, aged 80, was father of W. G. Ross, Managing Director Montreal Street Ry.

A section of the street railway employes at Hamilton, Ont., have withdrawn from the existing union, and have applied for a charter from the Canadian Association.

The Montreal Street Ry. has at present 75 pay-as-you-enter cars in operation on its lines, and it is expected by the beginning of May to have at least 50 more in service.

T. Smith, of the Gladstone Hotel, Toronto, was fined $5 Feb. 4 for selling intoxicating liquor to a street railway employe in uniform. This is the first charge of the kind brought under the Ontario Railway Act.

It is understood that the Ontario Railway and Municipal Board has decided upon a fender which it will approve for use by the street railways, and expects to be able to approve of a second pattern. When this is done the formal order of approval will be issued.

The Ontario Railway and Municipal Board's inquiry into the overcrowding on the cars of the Toronto Ry., on the complaint of the City Council, was adjourned on Feb. 8 until Feb. 21 to enable the company to make inquiries as to the state of traffic during rush hours in other cities.

The Montreal Street Ry. Co. is asking for legislative authority to enable its conductors and motormen to eject objectionable passengers from its cars. At present, in case of a disturbance it is necessary to wait for a policeman before the objectionable person can be removed.

The Ontario Railway and Municipal Board has decided on a complaint regarding fares charged on the Woodstock, Thames Valley and Ingersoll Ry., that the intention of the act is clearly that no matter where a passenger boards a car he shall pay the minimum fare of 5c. if he travels a distance not exceeding three miles; if he travels a distance exceeding three miles then he shall pay two cents a mile for the distance actually travelled.

The C.P.R. has opened its new ticket office at Main St. and Portage Ave., Winnipeg.

A contract has been let to McRae, Chandler & McNeill for the construction of the main line of the Temiskaming and Northern Ont. Ry. from the end of the present contract to a junction with the route of the G.T. Pacific Ry.

The Treasurer of Quebec, in his budget speech for the year 1905-06, stated that the payments on account of subsidies to railways and to the Q. M. O. and O. Ry. during the year were less by $57,143.47 than in 1904-05; the payments on account of the Quebec Bridge being the same, $30,000. The balance of subsidies to railways authorized by the Legislature, but not earned at June 30, 1906, was $388,787.08. The balance of the subsidy to the Quebec Bridge authorized but not earned June 30, 1906, was $70,000. An act to change the taxes on railways is under consideration. At present certain railway companies pay double taxes; one on their profits or on subsidies they received, the other on their mileage. The new proposal increases the taxation on mileage and assimilates it more to that paid by railway companies in Ontario.

Toronto Railway Company's Report.

The following report was presented at the annual meeting, Feb. 6: "It is with great pleasure that the directors submit the statement for the year ended Dec. 31, 1906, showing, as it does, a continuation of healthy increases in earnings. The gross earnings have now passed the three million dollar mark, and for the year were $3,109,739.61, an increase of 12.8% over 1905. They are also gratified to report that the large expenditures which have been made during the past three years, specially improving the power plant and other properties, have contributed to a reduction in the percentage of operating expenses to gross income from 56.8% in 1905, to 52.9% in 1906. The net result is, therefore, an increase of $276,337.18 in the net earnings, which amount to $1,463,224.34.

"During the year the distribution of gross earnings has been as follows: Operating expenses, $1,646,515.27; bond interest and fixed charges, $217,199.55; payments to the city—percentage on earnings, $348,963.48; pavement charges, $80,965.65, four quarterly dividends of 1½% each, aggregating $460,241.17. From the surplus of $355,854.49 there has been transferred to contingent account $100,000.00, and the balance, $255,854.49, has been carried to profit and loss account, which now shows a credit of $1,970,653.26.

"In pursuance of the policy established some years ago, the directors have charged to contingent account during the year $143,468.90. This represents, in addition to allowance as depreciation on the properties, special renewals of track on Queen St. West, from Yonge to Spadina Ave., and replacing wooden by iron poles. During the year $518,491.79 was expended on capital account, chiefly in connection with the following: Purchase of equipment for new sub-station. Underground conduit for connecting the several sub-stations and power house. Construction of a large number of 40 ft. double truck convertible cars, and motor equipments for same. Track extensions on Avenue Rd., Gerrard St. East, Dupont and Richmond streets, Dovercourt Rd., Lansdowne Ave., Scott, Wellington and Victoria streets. The first supply of current from the Electrical Development Co. was delivered on Nov. 19, 1906, since which date the company has been receiving power continuously. All the properties have been maintained in a high state of efficiency throughout the year.

"On April 17, 1906, the shareholders authorized an increase of $1,000,000 in the capital stock, by the issue of 10,000 shares at par. These shares were offered to the shareholders and were subscribed and are now paid up. The proceeds of this issue, together with the surplus earnings, has enabled the company to undertake the capital expenditure mentioned above, and leaves sufficient cash in the treasury to enable the company to continue extensions and improvements to the system wherever necessary. During the year, the city of Toronto received from the company in percentage on earnings, pavement charges and taxes, a total of $467,365.44.

"The Toronto and York Radial Ry. system has had an exceedingly successful year, and shows gross earnings of $221,450.17 against $168,462.27 for 1905. The net earnings for the year, after providing for operating expenses and fixed charges, are $30,094.16. Of the gross earnings 10.7% represents earnings on express business on the Metropolitan Division. While the proportion to the total earnings is small, the volume of the express business shows an increase of 63% over the previous year, and every indication of a continued healthy increase. The extension of the Metropolitan Division from Newmarket to Jackson's Point has been completed and will be ready for operation in the spring. It is expected with the operation of this extension a very material increase will be made in the business. The company has 49.9 miles under operation, and, with the mileage now constructed and ready for operation, the system consists of 75.7 miles."

ASSETS.

Road and equipment, real estate and buildings, including pavements, etc.		$13,104,631.94
Stores in hand	266,063.91	
Accounts receivable	165,608.57	
		431,672.48
Cash in bank		674,982.23
		$14,211,286.65

LIABILITIES.

Capital stock		$8,000,000.00
Bonds—4½% Sterling	$2,030,373.33	
4½% Currency	983,000.00	
6% Debentures	600,000.00	
		3,613,373.33
Injuries and damages insurance fund	$16,364.32	
Mortgages	70,275.00	
Accounts and wages payable	157,291.39	
Accrued interest on bonds	64,897.55	
Unredeemed tickets	38,937.63	
Dividend payable Jan. 2	119,439.00	
Contingent account	160,055.17	
		627,260.06
Profit and loss as at Dec. 31, 1905	1,714,798.77	
Balance surplus	255,854.49	
		1,970,653.26
		$14,211,286.65

INCOME ACCOUNT.

Net income after deducting all expenses and fixed charges		$897,061.31
Appropriated as follows:		
Quarterly Dividends		$460,241.17
Pavement charges		80,965.65
Surplus—		
Contingent account	$100,000.00	
Profit and loss account	255,854.49	
		$355,854.49
		$897,061.31

COMPARATIVE STATEMENT.

	1906	1905
Gross earnings	$3,109,739.61	$2,747,324.58
Operating expenses	1,646,515.27	1,560,437.42
Net earnings	1,463,224.34	1,186,887.16
Passengers carried	76,958,488	67,881,688
Transfers	28,159,558	23,625,752
Percentage of operating expenses	52.9%	56.8%

TORONTO & YORK RADIAL RY. CO. INCOME ACCOUNT.

	1906	1905
Gross earnings	$221,450.17	$168,462.27
Operating expenses	138,492.29	106,589.06
Net earnings	$82,957.88	$61,873.21
Bond interest	$48,534.25	
Taxes	4,329.47	
	52,863.72	41,625.20
Net profit	$30,094.16	$20,248.01

The directors for the current year were re-elected as follows: President, W. Mackenzie; Vice-President, F. Nicholls; other directors: Hon. G. A. Cox, R. Forget, J. Gunn, W. D. Matthews, Sir Henry M. Pellatt.

Grain Elevator Notes.

The export of grain from Montreal during the season of navigation of 1906, was 56,812,000 bush., an advance of 23% over the season of 1905.

The Bull and Snell Elevator Co. has been incorporated under the Northwest Territories ordinance respecting companies, with office at Yorkton, Sask.

The R. Hunt elevator at Boissevain, Man., containing 20,000 bush. of wheat, which was burned to the ground recently, is to be rebuilt. The fire salvage realized $750.

The Export Elevator Co. has passed a by-law reducing its capital from $500,000 to $389,200, and is seeking confirmation of the same under the Manitoba Companies' Act.

The Winnipeg Elevator Co.'s elevator at West Selkirk, Man., was destroyed by fire Feb. 8. It contained about 5,000 bush., and was valued at $6,000. The building and contents were fully insured.

The Manitoba Grain Growers' Association

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at its annual convention, which closed at Brandon Feb. 7, passed resolutions asking that railways be compelled to allow the construction of small elevators at the same rates as larger ones, and that there should be Government elevators at Port Arthur and Fort William, Ont.

A proposition is being considered at Sydney, N.S., for the erection of a grain elevator there. It is suggested that the steamships which the Montreal Transportation Co. is having built in Great Britain to carry steel rails from Sydney to Fort William, Ont., bring return cargoes of grain for shipment to Europe through Sydney.

A suggestion has been made to the Manitoba Legislature Committee on Agriculture to the effect that a conference be called of representatives of the municipalities, elevator owners, the Grain Exchange, bankers, exporters, track buyers, and railway men to discuss the whole question of wheat handling, particularly with reference to the question of the government ownership of elevators.

The appeal of the Northern Elevator Co., Winnipeg, against the Lake Huron Milling Co., Goderich, Ont., from the decision of Justice Falconbridge, in its action to recover $16,000 balance alleged to be due on a cargo of 95,000 bush. of wheat, has been dismissed by the Ontario Court of Appeal. The sum claimed represents the difference between May and July values, and the dispute between the two parties arose over a misunderstanding of brokers' terms.

A memorial has been presented to the Dominion Premier asking that the terminal elevator question submitted to the Grain Commission be reported on at once without waiting for the general report. The Manitoba members of Parliament also brought before the Premier the question of the ownership of the terminal elevators at Port Arthur, Ont., with a view of action being taken to prevent them passing into the hands of grain buying or grain operating concerns.

An Edmonton press despatch states that the Canadian Society of Equity is being organized there with a capital of $60,000 for the purpose of endeavoring to control grain prices by erecting its own elevators, warehouses, going into the grain business, and conducting farmers' exchanges. The officers are: President, J. M. Moran, Fort Saskatchewan, Alta.; Vice-President, W. B. Ball, Salisbury, Alta.; Secretary-Treasurer, W. J. Keene, Edmonton, Alta.; other directors: A. A. Shaw, Nanton, Alta.; J. Sanford, Salisbury; A. Von Mielecki, Calgary, Alta.; R. Pearson, Claresholm, Alta., D. B. Wilson, Namao, Alta.

The Grand Trunk Pacific Terminal Elevator Co., which is a G.T. Pacific Ry. subsidiary, has employed the Barnett-McQueen Co. to prepare plans for the erection of an elevator, having a capacity of 2,000,000 bush., at Fort William. We are advised that the details in regard to the structure have not been completed. G. Murray, of the Barnett-McQueen Co., in an interview Jan. 28, said: "It will be one of the most up-to-date houses on this continent. The construction will be concrete, steel and tile, and will be entirely fireproof. It will be built so that four trains can discharge their grain in the house at the same time. I believe that it will be the fastest grain house yet erected. The elevator will be built at the mouth of Mission River, at the G.T. Pacific Ry. terminals; and reports state that it will be one of four to be built by the company.

MARINE DEPARTMENT

Shipping Federation of Canada.

At the annual meeting at Montreal, Feb. 13, there were represented the owners of 475,195 tonnage, an increase of 20,279 as compared with 1906. Following is the address of President H. A. Allan: The season of navigation of 1906 was the longest since 1900. The first ocean steamer arrived April 29, and the last left Dec. 2. The number of seagoing steamers visiting the port was 783, of a combined tonnage of 1,957,615, compared with 786 vessels in 1905 of a tonnage of 1,918,002. The shipments of grain show an increase, but those of corn and barley show a decrease from the previous year; wheat and flaxseed also show an increase. Cheese shows a very large increase, but butter fell off. There was a gain in the shipments of cattle also. The passenger business of the port showed a very large increase.

The season was not, on the whole, satisfactory to owners, though freight rates have been somewhat better. Much detention and consequent expense has been caused to steamers visiting the port on account of the congested state of the wharves, the alterations to sheds that have been dragging along for some years, and car shortages. The large increase in imports was very much handicapped by the condition of the wharves, which seriously interfered with the handling of cargo and the forwarding of through imports as well as the delivery of local goods. This, of course, added extra expense to the steamers, and will continue to do so as long as the present conditions exist. The progress that has been made towards the completion of the new sheds in our harbor has been very disappointing; little or nothing has been done during the past year. Fortunately, pressure was brought to bear on the Harbor Board to prevent 50% of the berths in the inner harbor being taken for the construction of new sheds; otherwise these berths would not have been available and the business of the port would have become paralyzed. It is hoped that with the advent of the new Harbor Board the construction of the sheds will be pressed forward with vigor and in a practical manner, so that the handling of cargo may be effected economically and with despatch, and the port of Montreal may once again be able to compete with the other ports to the south of us, and regain a portion of the traffic which has been lost to the Canadian route for many years past. It is satisfactory to note that no further action has been taken by the Harbor Commissioners in connection with the berth charges referred to in my report of last year.

The question of making Montreal a free port is one that ought to receive the early and favorable consideration of the Government. There has been introduced into the State Legislature at Albany a bill to abolish the present wharfages at the port of New York by repealing the city charter relating thereto, a sacrifice it is said of $13,000,000 a year, as against wharfages at the port of Montreal of $360,000. This action ought to be sufficient to impress upon our own Government the necessity of taking immediate action to meet the competition that may be expected.

Amongst the important parliamentary bills which have come before Parliament during the year was the Lord's Day Bill. This bill was introduced at the instigation of the Lord's Day Alliance, and was adopted as a Government measure, and had it been allowed to pass as introduced it would have prevented vessels, after landing their steerage passengers at Quebec on a Sunday, from proceeding on their journey the same day. It would also have prevented the loading of cattle and the landing of perishable cargo. Strenuous objections were taken by the federation and other transportation interests to this act, and it was considerably modified

Good progress has been made in carrying out the work of deepening and widening the ship channel between Montreal and Quebec. The following extract from the report of the Superintending Engineer of the ship channel, F. W. Cowie, explains the work that has been done and what is in contemplation: "The work in the ship channel through Montreal harbor, known as the Longueuil shoal, which the Montreal Board of Trade and Shipping Federation of Canada urged the Government to undertake, was finally completed on Aug. 9, and has already proved of great benefit to navigation. This shoal, situated at the foot of current St. Mary, will no longer be a serious menace to navigation, as the improvements give a wide, easy channel, and the leading marks are to be of a permanent and distinctive character. The completion of the 30-ft. channel through Lake St. Peter was promised for the end of Oct., 1906. It was actually completed to the old width of 300 feet on Nov. 14. Although the widening in Lake St. Peter has been completed at all the important curves, and over about one-third of the length requiring dredging, there remains yet about 12 miles of channel to be widened, and the dredge Tarte will now be able to undertake the work of the widening of the straight portions without the constant delays, as was the case when she had to stop work for every passing ship. With regard to the promise made by the Minister that the rest of the ship channel down to Batiscan would be completed during Oct., I have to state that this estimate was substantially exceeded, and in addition most of the work of widening and deepening the Batiscan Traverse was completed before the end of the season. The important work at Cap a la Roche was commenced early in the season, and an amount of about 160,000 cubic yards of shale rock has been removed. The lines of the proposed improvements at Cap a la Roche and Cap Charles have been adopted with a view to easy navigability and a minimum of interruption during construction. The Shipping Federation of Canada will be consulted at an early date with a view to a decision as to the locality of the work which should be first undertaken. With the depth of 30 ft. completed between Montreal and Batiscan, that depth is, therefore, available for the whole distance between Montreal and Quebec by waiting for high tide for the division between Batiscan and Quebec. The announcement of the completion of an available channel for navigation between Quebec and Montreal, of 30 ft. at extreme low water, cannot fail but be of very great importance to the trade of Canada. On the opening of the season of navigation of 1907, the gauge of Sorel will be changed, and an additional draft of nearly 4 ft. given. Compared with the lowest stage of water in 1906, the depth would be increased from 26 ft. 10 in. to 30 ft. 6 in. The whole of the elevator dredge fleet will next year be concentrated between Grondines and Batiscan, if possible, four to work day and night at Cap a la Roche and Cap Charles." It will be noted from this report that it is the intention of the Government to centralize the work at Cap a la Roche and Cap Charles, the two points in the river demanding the most pressing attention.

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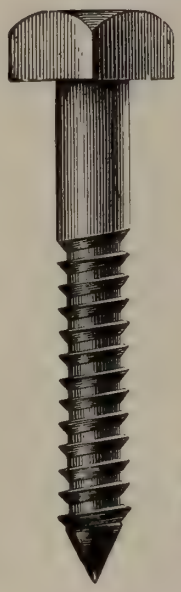

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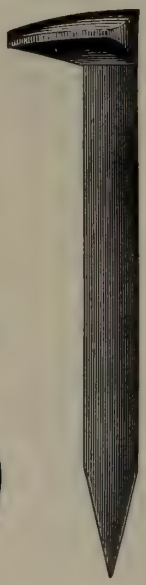
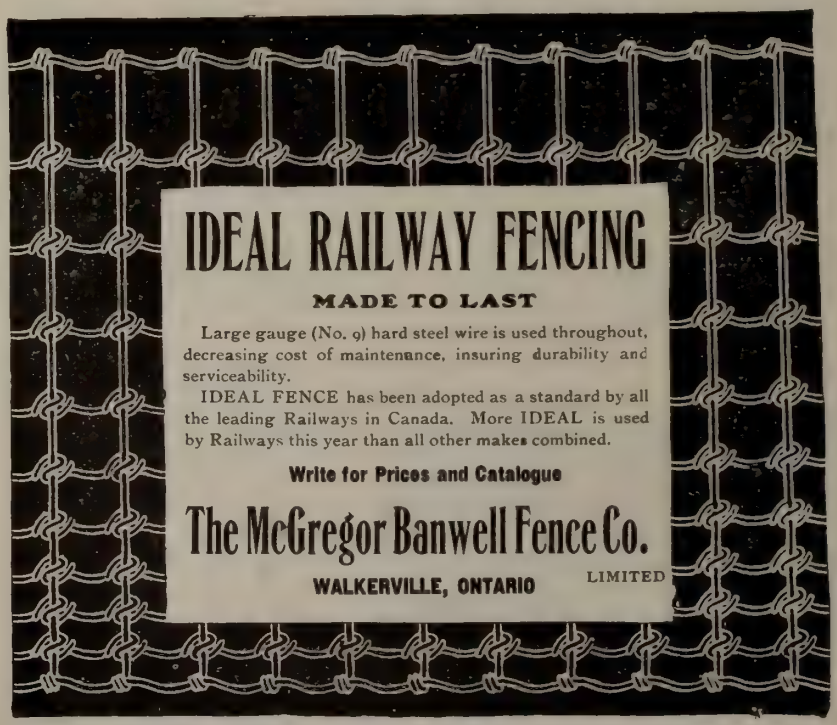


TORONTO — CANADA



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The large expenditure by the Government in improvements in aids to navigation has been justified by resulting in the reduction of the insurance rates for the seven years from 1900 (the year the shipping enquiry was held), to 1906, inclusively of 39% on provisions and 54% on grain, thus clearly showing that the work undertaken by the Government has been beneficial to the country. Although the insurance rates on cargo carried by vessels on the Canadian route is still largely in excess of what it should be, and, as compared with rates on cargo shipped from ports in the U.S., the average for the season being 31½c., as compared with 15c. from New York, this still leaves a very considerable advantage in favor of the U.S. ports.

The trade of the St. Lawrence has grown enormously, and consequently the vessels on the route have improved in speed, size, economy and comfort. In other words, the owners have done their part to meet the trade and it now rests with those in authority to provide the facilities necessary for the proper handling of freight seeking this route. The question of accommodation has become acute, and if the port of Montreal with all its natural advantages is to be developed, it must be placed on a par with U.S. ports.

The cordial relations which have existed between the federation and the different Government departments have continued during the year, and to this I attribute largely the success of our work; and it gives me pleasure to testify to the cordial assistance and co-operation of the Minister of Marine, his deputy, and the engineer of the department. The latter's appointment as engineer of the harbor and ship channel is much appreciated by this interest, and it is pleasing to note that he will still retain his authority of the ship channel; besides, we will have the advantage of his experience in his new position in charge of the improvements in the harbor.

Following are the officers for the current year: President, H. A. Allan; Treasurer, J. R. Binning,; Secretary, T. Robb; Executive Council: D. W. Campbell, C. McLean, R. W. Reford, J. Thom, F. L. Wanklyn. At its first meeting the executive will elect a chairman, the retiring chairman being J. Thom.

The Board of Railway Commissioners has given notice that as the Revised Statutes of Canada come into force on Feb. 1, applications under the Railway Act, and citations, will have to be made having reference to Revised Statutes of Canada, chap. 37.

Port Colborne Elevator.

The building and operation of an elevator at Port Colborne, Ont., the Lake Erie outlet of the Welland Canal, was the first recommendation made to the Government by the Transportation Commission, after hearing evidence at various ports and other places in the Dominion from those interested in the Canadian grain trade. The recommendation was considered a very good one by vessel owners, and others interested. The position of Port Colborne is geographically the same as Buffalo, N.Y., viz., situated at the foot of deep water navigation. Grain can be carried from there in suitable vessels and barges by way of the Welland Canal, Lake Ontario and the St. Lawrence River to Montreal as cheaply as it can be carried from Buffalo to New York, while the rail facilities to all the various Atlantic ports of both Canada and the United States are equal to that of Buffalo. It is also well suited for winter storage for supplying Canadian millers with grain during the winter from cargoes brought down before the close of navigation. These are all very important points and render the location of the elevator at Port Colborne particularly desirable.

The plans for the elevator which the Government originally contemplated erecting, provided for a storage house having a capacity of 2,000,000 bush. This, it was considered by vessel men, was on the small size, considering the increasing size of the vessels engaged in the grain carrying trade on the Upper Lakes—there are several 9,000 ton steamers under construction for the Canadian trade at the present time—but nothing was urged against it, as it was felt that the extra accommodation required would be furnished as soon as the necessity for it was apparent. It is now announced that the elevator to be built will only have a capacity for 1,000,000 bush., a size utterly inadequate to the present requirements of the trade. Three or four of the modern large-sized vessels would fill the elevator at once and block any further business being done, particularly in the absence of a perpetual stream of barges, etc., taking it away. What is required at this, as well as at other points, is adequate provision for the handling of the cargoes of the big vessels now engaging in the trade. A 2,000,000 bush. elevator was contemplated at first, and upon the strength of the recommendation that this would be provided, vessel owners took the necessary steps to prepare themselves by the ordering of larger steamers, for securing for the Canadian route the carriage of the wheat crop of the Northwest. In the light of the complaints of crowded grain elevators on Georgian Bay, and the inadequate supply of railway cars to move the grain thence, it is surprising that the Dominion Government should neglect to provide the most complete facilities at the only point in the country giving the choice of rail or water haul to the ocean port. It is to be hoped that the representations being made to the Government to adhere to the original plan for a 2,000,000 bush. elevator will be successful.

Prince Edward Island Car Ferry.

The title of the company which merchants and others of Charlottetown, P.E.I., are endeavoring to organize for the operation of a car ferry across Northumberland Strait, is the Straits Transportation Co., and the proposition made to the Dominion Government is in return for a reasonable subsidy for 10 or 12 years, to operate a car ferry from Charlottetown to Pictou, N.S., or some other convenient point on the mainland. The company proposes to place on the route a powerful ice-breaking steamer, which will be built in Scotland and be of about the following dimensions: Length, 280 ft.; breadth, 48 ft. The steamer will have a capacity of 12 or 15 loaded 30 ton freight cars, and will have engines of 4,500 I.H.P. This will give a speed of 15 knots an hour, and will, it is claimed, enable her to go through solid ice at six or seven miles an hour, and it is also claimed that her construction will enable her to work through 10 ft. of packed ice. The cost of the steamer will be about $300,000, and it is proposed, in return for the subsidy, to make a daily trip between Dec. and May. The difference in gauge between the I.C.R. and P.E.I.R. will be overcome by placing the two cars together on suitable tracks at Charlottetown, and transferring the freight, which can be done at small cost and without injury to the most perishable products. It is suggested that this proposition will give the agriculturists of Prince Edward Island all the transportation facilities required, and will be the least expensive plan to adopt. A tunnel, which is advocated, is estimated to cost $10,000,000, while a car ferry to run between Cape Tormentine and Cape Traverse is estimated at $2,000,000, including the cost of changing the P.E.I. Ry. to standard gauge.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM JAN. 15, 1907, TO FEB. 12.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Blue Peter III	122,263	West Mystic, Conn., 1906..	Screw 2 N.H.P.....	35.4	6.8	3.3	5	5	Montreal, Que.....	F. R. Redpath, Montreal, Que.
Dorothy.....	122,016	North Bay, Ont., 1907.....	" ¾ "	35.6	10.2	3.6	5	3	Ottawa, Ont.....	J. M. and H. Wallace, Cobalt, Ont.
Margota.....	122,262	Racine, Wis., 1902.....	" 1 "	38.4	8.0	4.0	10	7	Montreal, Que.....	R. Forget, Montreal, Que.
Queen City...	121,980	Seattle, Wash., 1883.....	" 23 "	69.9	18.8	8.4	67	—	Victoria, B.C.....	Queen City Trading and Transportation Co., Victoria, B.C.
St. Jacques...	122,261	Grand Piles, Que., 1906....	Paddle, 427 N.H.P....	80.2	19.2	3.1	57	33	Montreal, Que.....	T. Lemyre, Grand Piles, Que., and J. A. Carigan, Grand Mere, Que.
Thelma.....	119,962	Wellington, Ont., 1905.....	Screw, 10 N.H.P.....	40.0	9.11	5.7	19	13	Picton, Ont.....	K. B. DeMill, Wellington, Ont.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM JAN. 15, 1907, TO FEB. 12.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Dredge No. 1...	122,174	Port Arthur, Ont., 1903....	Dred.	65.0	24.0	8.0	176	176	Port Arthur, Ont..	Great Lakes Dredging Co., Port Arthur, Ont
Dredge No. 7...	122,173	Duluth, Minn., 1903.....	"	98.0	30.0	8.0	235	235	" " "	" " "
E. G. Lewis.....	116,877	.....	Barge	96.0	18.0	8.6	123	113	St. Catharines, Ont.	A. H. Bradley, Marshville, Ont.
Lucile.....	75,399	Gosport, Eng., 1876.....	Schr.	117.0	23.1	13.4	158	116	Sydney, N.S.....	J. H. Crosbie, St. John's, Nfld.
Scow No. 1.....	122,171	Port Arthur, Ont., 1903...	Scow	96.0	19.0	7.0	87	87	Port Arthur, Ont..	Great Lakes Dredging Co., Pt. Arthur, Ont.
Scow No. 2.....	122,172	" " "	"	73.0	22.0	7.0	112	112	" " "	" " "
Thos. F. Bayard.	121,979	Brooklyn, N.Y., 1880.....	Schr.	86.0	21.1	8.6	70	67	Victoria, B.C.....	Thomas Stockham, Victoria, B.C.

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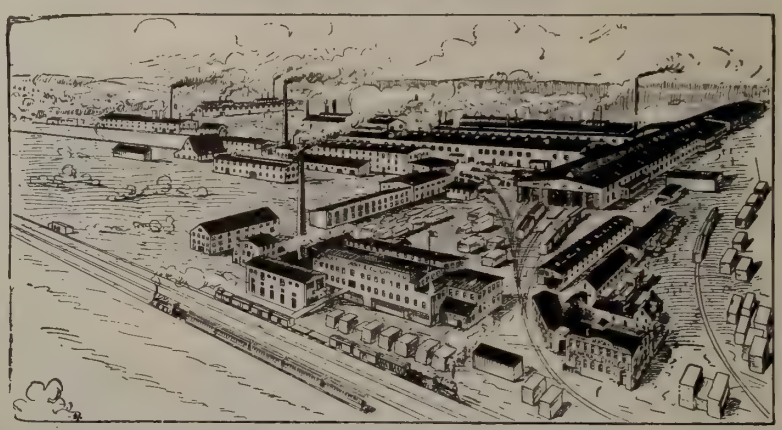


Car Wheels, Axles, Forgings, Castings, Etc.
CAPACITY PER MONTH
300 Freight Cars 4 Passenger Cars 4 Snow Plows 3,000 Car Wheels
2,500 Car Axles 500 tons Castings 1,000 tons Forgings

Atlantic and Pacific Ocean Marine.

D. W. Campbell, Manager of the Elder-Dempster Co.'s steamships at Montreal, sailed Feb. 15 from New York for Liverpool.

The Quebec Transport Co. is completing arrangements for the trans-Atlantic freight trade from Quebec for the coming season of navigation.

The C.P.R. steamships Empress of India, Empress of Japan and Empress of China, are to be equipped with the Marconi wireless telegraph apparatus.

The C.P.R. steamship Empress of Ireland has been in drydock at Liverpool, Eng., to have some repairs made and some overhauling done. Her runs were taken by the Allan Line S.S. Tunisian.

The C.P.R. S.S. Empress of Britain, which reached Halifax, N.S., Jan. 31, made the run from Liverpool, Eng., in 5 days, 18 hours and 31 minutes, the average rate of speed being 18.2 knots an hour.

The London, Eng., Court of Admiralty has found that the S.S. Warnow was alone to blame for damages to the Allan Line S.S. Hibernian, arising out of a collision in the English channel, July 21, 1906.

The Dominion Government has promised to continue the subsidy to the Dominion Line for carrying a mail to Great Britain, to be made up in Montreal on Saturdays, during the 1907 season of navigation.

The C.P.R is credited in Victoria, B.C., with the intention of developing a new port on the Alberni canal, on the west coast of Vancouver Island, and making it a port of call for its Pacific ocean steamship service.

Despatches from Mexico state that all arrangements have been completed for the inauguration of the new steamship service with Victoria and Vancouver, B.C. The first steamer is expected to be on the route early in March.

Capt. G. S. Dale, master in succession of the Quebec, Texas, Dominion and Brooklyn, belonging to the Mississippi and Dominion Steamship Co., and latterly outside manager of the Bush Terminal Docks, Brooklyn, N.Y., died there Jan. 21.

The C.P.R. has secured from the Mersey Docks and Harbor Board the use of the north side of Sandon dock, Liverpool, for its steamers. The company is given permission to build cold storage accommodation for butter, cheese and other perishable food products.

Section 451 of the Merchant Shipping Act of 1894 was repealed by sec. 10 of the Merchant Shipping Act, passed by the Imperial Parliament in 1906, which came into force Dec. 21 last. This section deals with the loading of timber. At the last session of the Dominion Parliament, an act was passed bringing the Canadian Act in line with the British Act.

The Newfoundland Government has closed a contract with a British firm of steamship owners for the maintenance of a 22 knot steamship service between St. John's, Nfld, and a port on the Irish coast. The subsidy payment is to be at the rate of $75,000 a year. An act confirming the contract is being considered at the current session of the colonial Legislature.

The Postmaster-General stated in the House of Commons recently that the Government was going to have in the summer a new steamer as a tender for the landing of passengers and mails at Rimouski, Que. The present condition of the port was a national disgrace, the accommodation was poor and did not compare with that provided at a second or third rate port in Europe.

It is reported from Liverpool, Eng., that the Allan Line intends to resume calling at Moville (Londonderry), Ireland, with its fast steamers. This call was cut out some months ago so as to enable the mail steamers to sail direct from Liverpool to Canada, with a view of saving time. The slower steamers of the Allan Line continued to call at Moville, but the C.P.R. slower steamers made a call off Belfast, Ireland.

The Imperial Privy Council has heard arguments in the case arising out of the collision between the Allan Line S.S. Parisian and the Hamburg-American Line S.S. Albano, at the entrance to Halifax harbor, by which the former sustained such damage that she sank after reaching her wharf. The sealed award of the arbitrators who assessed damages is on file in the Admiralty Court at Halifax, N.S., awaiting the decision of the Council.

The new steamship for the Dominion Line, for which an order has been placed with Harland and Wolff, Belfast, Ireland, will have a length of 550 ft., and a breadth of 67 ft., and will be of 14,000 tons gross and 9,000 tons register. The average sea speed is to be 16 knots an hour. The passenger accommodation will be fitted up in the most modern style, and there will be ample promenade space for all classes of passengers. The new steamer will be named the Alberta.

A resolution was submitted to the House of Commons recently requiring that in contracts with trans-Atlantic steamship companies receiving subsidies provision shall be made for cold storage and cold air chambers; that if the temperatures are not such as is called for, the subsidy shall be forfeited either in whole or in part; that clearance papers shall be refused if the steamers are not equipped with efficient mechanical ventilating apparatus for each chamber; and that facilities for inspection by Government officers be granted.

There was a general discussion on the trans-Atlantic mail service in the Senate recently, when Senator Power asked for the production of correspondence. He pointed out the advantages of Halifax, N.S., claiming that it required 15 hours less steaming than was required to reach St. John, N.B., where there might be a further delay of five hours if the mail steamers reached the port at low tide. Senator Ellis, a St. John man, was willing to have a full comparison made between the two ports, and did not fear the result. Senator Macdonald put forward the claims of Georgetown, P.E.I., with a car ferry connection with the mainland, and Senator Poirier claimed Louisburg to be the best winter port on the Atlantic Ocean. Senator Casgrain advocated an all the year round service to Halifax with 25 knot steamships.

Reports from London, Eng., show that the promoters of the Blaksod Bay-Halifax route are proceeding with their application to the Imperial Parliament, for the necessary powers to construct railways, etc., in Great Britain and Ireland. A number of the Nationalist members of Parliament have promised the proposals their support. The promoters of the tunnel between the Irish coast near Lorne, and the Scottish coast near Strauraer, have revived the project, and are asking Government aid towards the estimated cost of construction of £10,000,000. So far as Canada is concerned the plans for the projected new line have been laid before the Government, and consideration has been promised. Sir H. Montagu Allan expressed an opinion that the proposal would involve too many transfers, five instead of three, between London and Montreal. Halifax, to his mind, was the winter port and Quebec the summer port, but he would cut out the stop at Rimouski, owing to the delay caused. A call might be made at Sydney, N.S., with the mails if there was a fast train in waiting, and clear road, but he thought that passengers, as a general rule, would prefer going right on to Quebec.

Maritime Provinces and Newfoundland.

M. Donnellan has been appointed wharfinger of the Government wharf at Ogilvie Pier, N.S.

Surveys are being made at North Sydney, N.S., for the erection of a lighthouse on the north bar.

Capt. D. McKinnon, of the Dominion Government str. Brant, died at Summerside, P.E.I., Feb. 1.

Capt. A. Jackman, who died at St. Johns, Nfld., Feb. 1, was commander of the Peary Polar expedition in 1886.

The Frontier Steamboat Co. is negotiating for a steam lighter 157 ft. in length, for use on the St. John River.

The coasting str. Harlaw is receiving a thorough overhaul, and having a new deck put in at Dartmouth, N.S.

Capt. Pratt, of the Dominion Government str. Curlew, who has been under suspension for a year, has resigned.

Capt. Knowlton, of the Dominion cruiser Canada, has been appointed Capt.-Superintendent of the dockyard, Halifax, N.S.

The Lunenburg barquentine Ich Dien, 197 tons, has been sold to Crosbie & Co., St. Johns, Nfld., for the Brazilian trade.

The machine shop at the Halifax, N.S., dry dock was destroyed by fire Jan. 30, the damage being estimated at under $2,000.

The barque Erin's Isle, built at St. John, N.B., 1877, and capable of carrying 2,735 tons of coal, has been sold to Norwegian owners.

The str. Garibaldi has been repaired at Halifax, N.S., at a cost of about $20,000. She recently went ashore at St. Pierre, Miquelon.

E. Huntley has been appointed Harbormaster for Ingram River, N.S., and G. McLeod has been appointed to a similar position at Murray Harbor, P.E.I.

The Nova Scotia schooner Percy C., 287 tons register, has been bought by Capt. Hawkes and J. W. McAlary, St. John, N.B., the price paid being, it is stated, $18,000.

The Miramichi Lumber Co. has deposited plans with the Department of Public Works, Ottawa, showing the extension which it proposes to construct at its wharf at Chatham, N.B.

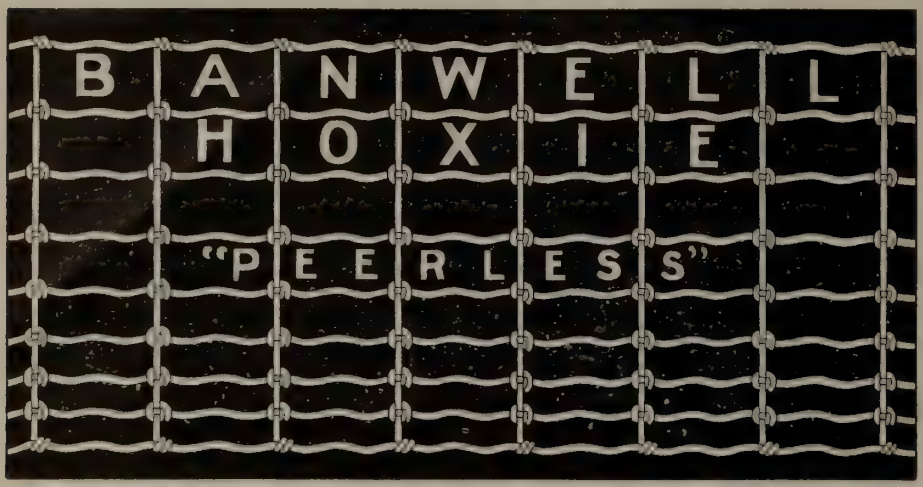
The str. Amelia running between Halifax and Canso, N.S., lost her propeller through collision with ice off Glasgow Head, Feb. 9, and was taken into Arichat, N.S. Her place on the route was taken by the Atlantic.

The winter steamers trading to Prince Edward Island are running from Georgetown, P.E.I., to Pictou, N.S., and return, one boat leaving each place every morning. This is found, we are informed, to be the most reliable service for the winter.

The Maritime-Newfoundland Wrecking Co., St. Johns, Nfld., has made an application to the Dominion Government for a subsidy in connection with its maintenance of a wrecking plant. Capt. A. Manley was recently at Ottawa in connection with the negotiations.

Residences at the Halifax dockyard have been allotted to various officers of the Dominion Department of Marine, including the resident engineer, agent, Superintendent of Lights, Inspector of Hulls, storekeeper, and commander of the str. Lady Laurier. There are four or five other residences which have not yet been allotted.

The St. John, N.B., City Council has accepted the tender of Clark and Adams for the construction of a new deep water berth on the west side, at a cost of $149,000. This berth will be an extension of one now under construction, and will be



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Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
All prices are subject to change without notice.

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An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160 Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
" "	9.00	" "	"	215.70	" " "	73.46	" "	180.00
" "	10.00	" "	"	239.70	" " "	81.62	" "	200.00
" "	11.00	" "	"	263.60	" " "	89.78	" "	220.00
" "	12.00	" "	"	287.60	" " "	97.96	" "	240.00
" "	13.00	" "	"	311.55	" " "	106.10	" "	260.00
" "	14.00	" "	"	335.60	" " "	114.32	" "	280.00
" "	15.00	" "	"	359.50	" " "	122.44	" "	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments

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600 ft. long, completed on the south side, and faced for 200 ft. on the north side.

The Reid Newfoundland Co. has placed an order with shipbuilders in Scotland for two steamships for the Port-Aux-Basques-North Sydney route. The steamers are to be of the Bruce type, and will be launched in the fall. It is the intention to provide a daily service between Canada and Newfoundland, transferring the Bruce to another route.

The Washademoak Steamship Co. has been incorporated under the New Brunswick Companies' Acts, with a capital of $8,000 and offices at Cody's, N.B., for the purpose of operating the str. Aberdeen, or any other steamers, and the carrying on of a general navigation business. The provisional directors are: J. E. Hetherington, S. G. Perry, Cody's, N.B.; G. H. Perry, A. H. Stevens, J. E. Porter, St. John, N.B.

The Dominion Coal Co.'s chartered str. Mystic towed the Norwegian str. Nanna to Halifax, Feb. 5, with her tail shaft broken. The towing service was rendered in a storm, and in a dangerous position, the Mystic getting on a ledge and damaging a number of her plates. The Nanna was finally towed into harbor by tug, and the Mystic came in under her own steam. The Nanna has been libelled for $60,000 by the Mystic.

The Gloucester Navigation Co. is the title of a company for which an act of incorporation is being asked at the current session of the New Brunswick Legislature. The proposed capital is $25,000, and the object of the company is to maintain a line of freight and passenger steamers or other vessels from a point along Chaleur Bay, in Caraquet, Gloucester county, to Lower Caraquet, Shippigan, Petite Lemeque, Petit Shippegan, Miscou and other points along Chaleur Bay, and to the Intercolonial Ry. at Petit Rocher, N.B., with all the necessary powers. N. A. Landry is solicitor for the applicants.

Province of Quebec Marine.

A. N. Roy has been appointed Dominion wharfinger, Peel Head Bay, Que.

The Richelieu and Ontario Navigation Co. has declared a quarterly dividend of 1¼%, payable Mar. 1, to shareholders of record, Feb. 23.

The Acting Minister of Public Works stated in the House of Commons, Feb. 6, that the Government had under consideration the construction of a dry dock at Montreal.

The Dominion Government str. Montcalm was engaged for several days endeavoring to break up the ice bridge at Cape Rouge, Que., prior to her leaving for the trip with passengers, mails and freight to Seven Islands Bay.

The action brought by the owners of the str. Gaspesian against the Montreal Elevator Co., for damages caused by a collision with a floating elevator at Montreal, was opened at Quebec, by Chief Justice Routhier, in the Exchequer Court, Feb. 1, and adjourned to Montreal, Feb. 20, when further evidence was taken.

Speaking at the annual meeting of the Montreal Board of Trade, the retiring President, F. H. Mathewson, said the foreign trade of the port for 1906 amounted to $546,929,038, an increase of $80,616,612 over that of the previous year. Montreal, he said, handled 32% of the exports and 28% of the imports of the country, while the duty collected was 28% of the gross customs revenues of Canada.

Following are the officers and directors of the newly organized North Shore Transportation and Wrecking Co.: President, T. Gagnon, Quebec; First Vice-President, D. Hatton, Montreal; Second Vice-President, P. Galibert, Montreal; other directors: A. H. Dandurand, T. Gauthier, O. Hebert, Montreal; A. Fafard, Pointe aux Esquimaux, Que.; Secretary-Treasurer, Jos. Cote, Quebec; General Superintendent, J. B. D. Legare, Quebec.

The Dominion Government has expended upon the deepening of the channel of the St. Lawrence between Montreal and Quebec, and other improvements on the St. Lawrence River between these cities, the following sums: Dredging, including supervision of the channel, $5,929,970; plant, shops, services, etc., $3,031,860; total, $8,961,830. These figures were given by the Minister of Marine in reply to a question in the House of Commons.

The Montreal Transportation Co. has been granted a supplementary charter under the Dominion Companies' Acts, increasing its capital from $500,000 to $1,000,000. The company is having two steamships built by A. McMillan & Son, Dumbarton, Scotland. They will be full canal size, about 250 ft. long, about 43 ft. beam and 24 ft. moulded depth. One is expected to be ready by April 2 and the other by May 2. The vessels will be utilized to carry steel rails from Sydney, N.S., to Fort William, Ont., and will have return cargoes of grain.

The Dominion str. Montcalm started on her first winter trip along the north shore, from Quebec, Feb. 12. Stops were made at Escoumaius, English Bay, Godbout River, Pointe des Montes and Seven Islands. There were a number of passengers, but only a limited quantity of freight was accepted. Small packages were to be taken from and to any of the stopping places, and mails will be carried. The Department gives no guarantee that the steamer will call at the various points named, but every endeavor will be made to reach these places. The steamer had to return to Quebec the same day owing to fog and a snow storm, but was under orders to leave as soon as the weather conditions favored. There were 60 passengers on board for the trip. The steamer went out on the trip two days later.

The Montreal Harbor Commission has issued a statement regarding the position of Chief Engineer, in which the resignation of J. Kennedy is announced on account of failing eyesight. The Commissioners "desire to place on record their appreciation of his long life of devoted service, his faithful and zealous performance of difficult duties from 1875 to the present day. And now, upon the occasion of his honorable retirement from active duty after 32 years of public service, they unanimously resolve to appoint him Consulting Engineer to the Board." It is also announced that F. W. Cowie, Superintending Engineer of the St. Lawrence ship channel for the Dominion Government, has been appointed Chief Engineer until the opening of navigation, when the question of a permanent appointment would be considered.

The Department of Trade and Commerce in its report for the year ended June 30, 1906, sets out that 29,816 seagoing vessels, having a registered tonnage of 16,843,429, entered and cleared from Canadian ports. Of these there were 12,201 Canadian vessels, of 2,304,942 tons; 5,104 British vessels of 9,049,453 tons, and 10,351 U.S. vessels of 3,076,529 tons. There was an increase of 2,049 vessels as compared with 1905. During the last season of navigation 56 Canadian and 40 U.S. vessels were engaged in the grain carrying trade from Fort William and Port Arthur. The greatly increased capacity of the U.S. vessels over the Canadian is shown by the fact that 48 U.S. vessels carried 9,336,000 bush. as against 4,757,000 bush. by the 56 Canadian vessels. One U.S. vessel, the William P. Snyder, loaded 380,262 bush. of wheat, the largest cargo of grain ever carried on Lake Superior. The transportation rate to Georgian Bay ports was 3c., and to Buffalo 3½c. a bush.

Ontario and the Great Lakes.

H. Lacasse has been appointed wharfinger of the Government wharf at Wendover, Ont.

The Merchants Montreal Line has joined the Eastern Canadian Passenger Association.

Hon. Clifford Sifton has purchased a new 100 ft. yacht for cruising on the St. Lawrence.

The Department of Public Works is considering tenders for the construction of a pier head at Burlington channel, Ont.

Jos. Robertson, foreman of the Ottawa Transportation Co.'s shipbuilding yards, Ottawa, died there suddenly, Jan. 27, aged 64.

The recent high water in Niagara River swept away the docks and buildings used by the Maid of the Mist at Niagara Falls. No damage was done to the steamer.

The Department of Marine has under consideration tenders for the removal of the tug Castle, now lying sunk at the head of Belle Isle, in Detroit River, Ont.

The Midland Coal Dock Co. has filed with the Minister of Public Works, Ottawa, a plan of a proposed extension of its docks at Midland, Ont., for which approval is being asked.

It is understood that Swan and Hunter, and Wigham-Richardson, Newcastle-on-Tyne, England, the builders, have made a bid to the underwriters for the abandoned str. Winona.

We are advised that the press report that the Northern Navigation Co. has purchased two large package freighters for the forthcoming season's trade "is not true, and is pure imagination."

Capt. Willoughby and R. Baxter, Sandwich, Ont., have purchased the wooden steamer Iron Age from J. Corrigan, of Cleveland, Ohio, and will run her in the coal trade between Sandwich, Ont., and Erie, Ohio.

The Muskoka Lakes Navigation and Hotel Co. will operate a steamboat service during the coming season of navigation in connection with the Canadian Northern Ontario Ry. at Bala, Foote's Bay, and Lake Joseph.

The investigation into the conduct of the officer in charge of the Canadian canal at Sault Ste. Marie, Ont., was practically concluded Feb 12. A good deal of contradictory evidence was taken which will be considered by the Government.

A deputation from Southampton, Ont., asked the Dominion Government, Feb. 2, to provide additional improvements at the harbor there, including a life-saving station, and a gas buoy to mark the reef at the entrance to the harbor.

Capt. G. C. Coles, examiner of masters and mates, Collingwood, Ont., has been conducting a class for instruction in seamanship at that port during the winter. The class has been largely attended, and the lectures have been much appreciated.

The Winnipeg Board of Trade has passed a resolution endorsing the proposal to enlarge the Welland Canal, but made a reservation with respect to the proposal to construct a waterway from Georgian Bay to Montreal by the Ottawa River valley.

The Port Credit Brick Co. has deposited plans with the Minister of Public Works, showing a dock which it proposes to erect on the water lot in front of lots 9 and 10, concession 3, Toronto tp., Peel county, Ont. The consent of the Government is being asked for the proposed work.

The Hamilton Board of Trade on Feb. 4, 1857, passed a resolution that a survey be made at the expense of the Board, with a view of deciding the practicability of constructing a ship canal from the head of Lake Ontario to the waters of Lake Huron. Such a canal is still in the future.

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A deputation representing the Muskoka Lakes Navigation and Hotel Co. waited on the Ontario Department of Public Works recently, to urge the necessity of making improvements in the navigable waters of the Muskoka Lakes region, and the need of additional wharfage accommodation.

J. U. Vincent, of Ottawa, and others associated with him in the development of St. Joseph, on Lake Huron, are applying at the current session of the Dominion Parliament for an act incorporating the St. Joseph Transportation Co., having for its object the construction of a waterway from Lake Huron to Lake Erie.

The Minister of Marine, replying to a question in the House of Commons recently, said that the Harbor Commissioners of Belleville, Ont., were required to expend any surplus revenue in harbor improvements. A revetment wall was under construction at a cost of $22,428, by Quinlan and Robertson, the plans of which had been approved by the Department.

The str. Strathmore, which was burned on Michipicoten Island, in Nov., 1906, was formerly the Gordon Campbell, which was built in 1871 by Gordon Campbell of Detroit, Mich., a native of Wellington Place, Canada, and sold to the Anchor Line in 1873. After some years of vicissitudes and idleness from 1899 she was purchased by G. Plunkett, Cobourg, Ont., and renamed Strathmore.

Following are the officers and directors of the Rockport Navigation Co. for the current year: Manager, Capt Carnegie; Secretary-Treasurer, R. Poole; directors: A. McL. Tennant, C. W. McCullough, J. A. Carnegie, E. and A. W. Mallory. At the recent annual meeting it was decided not to declare any dividend for the past year's operations, but to put the surplus into a sinking fund.

The Rainy River Navigation Co. owns and operates the steamers Kenora, Agwinde, Brandon and Maple Leaf, on the Lake of the Woods and adjacent waters. Its officers and directors for the current year are: President and Manager, G. A. Graham, Fort William, Ont.; Vice-President, W. Ross, Kenora, Ont.; other directors: J. T. Horne, Fort William; J. C. Graham, Winnipeg; A. R. Bartlett, Windsor, Ont.; Secretary-Treasurer, M. McCullough, Kenora, Ont.

The C.P.R., we are advised, has placed an order with the Fairfield Shipbuilding and Engineering Co., Glasgow, Scotland, for the construction of two freight and passengers for the Upper Lakes service. They will have the following dimensions: length, 336 ft.; width, 43 ft. 9 in.; depth, 27 ft. They will have a cargo capacity of about 2,300 tons, and accommodation for about 360 passengers. Twin screws will be provided and they will be equipped with quadruple expansion engines, balanced.

The Upper Ottawa Improvement Co. is having two alligator warping tugs built—the steel hulls in Toronto; the machinery at Simcoe, Ont., and the upper works will be put on by the U.I. Co. at Ottawa. The dimensions of the tugs are: length, 66 ft.; breadth, 14 ft.; depth, 5 ft. 8 in. The engines are larger than those usually placed in the ordinary alligator tug; the paddle-wheels have a diameter of 11 ft.; and the estimated speed is nine miles an hour. Each tug will carry a crew of seven.

The Brockville Navigation Co. had a profitable season during 1906, but the directors decided not to declare a dividend, devoting the earnings to repairs to the steamer and to the liquidation of the loan to purchase the Victoria. It was decided to raise the Victoria, and to fit her with a new compound engine. Following are the officers and directors for the current year: President, N. Cossitt; Vice-President, O. K. Fraser; Secretary and Managing Director, W. S. Buell; other directors: J. Grant, R. Bowie, J. A. Mackenzie

A company has been formed at Peterborough, Ont., with a capital of $40,000, to be known as the Otonabee Navigation Co., Ltd., for the purpose of carrying on a general navigation business on Rice Lake and adjoining waters. A small steamer now on the lake is reported to have been purchased, and a second steamer is reported to be under construction. The provisional organization consists of: President, W. H. Robertson; General Manager, Capt. W. H. White; Passenger and Traffic Manager, J. E. Henderson; Solicitor, R. F. McWilliams; Secretary-Treasurer, Miss K. Campbell.

In the course of a recent discussion in the House of Commons upon the transportation question, W. H. Bennett urged the importance of Midland as a port, and advocated its nationalization. The G.T.R. had secured a large portion of the water front at Midland, and the C.P.R. was expending considerable sums in developing Victoria Harbor, which was only a few miles distant. This showed the advantageous position of the harbor. A third railway connecting with Montreal and Quebec could be secured by the construction of an 18-mile spur to the Canadian Northern Ontario Ry.

Following are the directors of the Muskoka Lakes Navigation and Hotel Co. for the current year: J. R. Cockburn, R. A. Lucas, H. C. Maclean, J. S. Playfair, F. J. Phillips, M. S. Wilson. F. Wasley has been reappointed Manager of the navigation branch and L. M. Boomer, Manager of the hotel branch. At the annual meeting in Toronto recently, a report and financial statement were presented, but it was decided not to make them public, and not to pay any dividend. The principal dimensions of the steamboat which the company is having constructed in Toronto, for delivery not later than July 1, are: length, 120 ft.; breadth, 25 ft.; depth, 8 ft. She will be propelled by twin screws.

The Peninsula Tug and Towing Co. has been incorporated under the Dominion Companies' Acts, with a capital of $20,000, and offices at Wiarton, Ont., for the purpose of carrying on the business of the transportation of goods, wares, merchandise, timber and passengers upon land and water; to carry on the business of towing, wrecking and salvage in all its branches, in and over any of the navigable waters within, or bordering upon, the Dominion of Canada, to and from any port therein, and to and from any foreign port; and other necessary and incidental powers, and particularly to purchase the business now carried on under the firm name of the Peninsula Tug and Towing Co., and to pay for the same in fully paid-up shares. The provisional directors are: J. G. G. Simpson, F. Wood, W. Fox, D. J. and C. E. Buyers, all of Wiarton.

E. J. Walsh, engineer in charge of surveys for the Trent Valley Canal, in his report of the work done to June 30, 1906, refers to the surveys and preparation of plans for the outlets to Lake Ontario, from Rice Lake to Port Hope, Cobourg and Trenton respectively; and from Lake Couchiching to Georgian Bay, via the Severn River; and the extension from Holland Landing to Newmarket; and to the traverse and contour survey of Rice Lake. A reconnaissance survey had also been made for a proposed outlet to Georgian Bay, via the Nottawasaga River. Plans and estimates for the main outlets were in preparation. The question of the outlets was discussed in the House of Commons, Jan. 23, and the Minister of Railways promised that all reports and plans submitted and prepared in 1905 and 1906 would be brought down as soon as possible, and as soon as the Government received the final reports of the engineers, a decision as to the outlets would be arrived at.

The International Canal and Power Co. is the title of a company for which incorporation is being asked at the current session of the Dominion Parliament. It asks power to construct a canal from Thunder Bay, Lake Superior, or from Pigeon River to Lake of the Woods; from Lake of the Woods to Red River, or from Lake of the Woods to Winnipeg River, and thence by the said river to Lake Winnipeg; from the mouth of the Assiniboine River up said river to Brandon; from Lake Winnipeg to Cross Lake, so as to create a navigable waterway from Lake Superior to the mouth of the Saskatchewan River, and also to Brandon. Wide powers for the construction of wharves, docks, warehouses, elevators, hotels, tramways, telegraph and telephone lines, etc., are asked; it is also desired to have authority to develop waterpowers on the Pigeon and Arrow rivers, and to construct transmission lines for the distribution of electrical energy in the Thunder Bay and Rainy River districts. The company asks for permission to amalgamate with the Winnipeg Canal and Water Power Co., or other company with similar powers. A. E. Honeywell, Ottawa, is solicitor for the applicants.

J. H. Mathers, Halifax, N.S., who represents Canadian shipping interests on the Imperial Commission to enquire into the alleged shipping ring, represents the Lord Line of steamships, and other marine interests of Sir Thos. Dixon, of Belfast, Ireland.

A conference of the outside officers of the Department of Marine was held at Ottawa, recently, for the purpose of classifying lights in the order of their importance and the responsibility attaching to them, and the adoption of a properly graded scale of salaries.

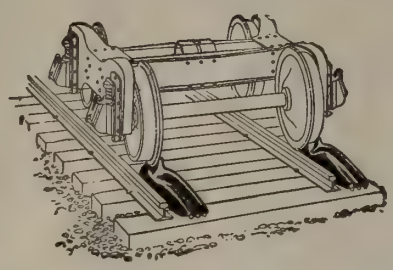
The appointment of the Government Commission to manage the Montreal harbor, is understood to be the introduction of legislation to establish a Dominion Harbor Commission to exercise jurisdiction over all deep water harbors engaged in the ocean trade in all parts of the Dominion.

The U.S. Congress has passed an act extending the powers of its section of the International Waterways Commission, so as to enable it to deal with disputes in any boundary waters. Up to the present the Commission has only been able to discuss questions affecting the Great Lakes and connecting waters.

The London, Eng., Chronicle publishes a despatch stating that the back of H.M.S. Dominion was broken, and her engines thrown out of alignment, as the result of the grounding in Chaleur Bay, when coming into the St. Lawrence in 1906. The despatch adds that the utmost that can be done is to patch the vessel up for harbor service.

Capt. H. O. Jackson, Toronto, in giving evidence before the special committee on the Masters and Mates Bill, now before the Dominion Parliament, stated that in 1906, to his knowledge, 60 or 70 qualified masters and mates had difficulty in procuring positions, or had to remain unemployed, because of U.S. men coming in and taking the positions.

The Minister of Marine stated recently to the committee which has under consideration the bill relating to the certificates to masters and mates, that during the last 10 years, 782 certificates had been issued for masters and mates, of which 10 were issued to foreigners, four of whom belonged to the United States. On the other hand, he said, there are a thousand masters and mates serving on U.S. vessels who have their homes in Canada. The committee decided to obtain the views of the Masters and Mates Association before giving the bill further consideration.



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The Department of Marine received tenders to Feb. 15, for the construction of a twin-screw composite steamer for the fisheries protection service on Lake Winnipeg.

Capt. J. K. Marshall, latterly examiner of masters and mates at Winnipeg, and master of the Dominion Government steamer Premier, on Lake Winnipeg, died at Selkirk, Man., recently. Among the vessels he commanded in Manitoba were the Red River, the Princess and the Rocket, prior to being appointed to the Premier.

Pearsons Limited has been incorporated under the Manitoba Companies' Act, with a capital of $250,000 and offices at Winnipeg, Man., for the purpose of acquiring and operating steam and other vessels, docks, wharves, warehouses, etc.; to operate stage coaches, tramways, railways, etc., and to carry on in connection therewith various other businesses. The provisional directors are: E. Brown, Portage la Prairie, Man.; A. N. McPherson, W. Pearson, G. H. Perkins, C. D. Corbould, Winnipeg.

B.C. and Pacific Coast Marine.

The B.C. tug Black Cat, owned by L. W. David, has been shipped by the str. Tottenham to Port San Marques, Mexico, for lumber towing purposes.

The tug Stranger, tender to the Government dredge King Edward, collided with an ice floe in the Fraser River off Westham Island Feb. 6, and sank.

The British Columbia Marine Ry. Co.'s foundry at Esquimalt, B.C., was destroyed by fire Feb. 2. The company has already set about reconstructing the plant on a larger scale.

The investigation into the administration of the Shipping Masters' Office at Vancouver, B.C., was closed Feb. 6. Commissioner Henderson will make a report of the evidence, etc., to the Department of Marine.

The Victoria Sealing Co.'s schooner Casco has been wrecked in Lower California. The Casco was one of the oldest vessels in the sealing fleet, and was the vessel in which R. L. Stevenson made his cruise in the Southern Pacific.

The str. Leelanaw, built at Newcastle-on-Tyne, Eng., 1886, and recently in the Alaska trade, has been purchased by Jas. Dunsmuir, by whom she had been chartered. The Leelanaw is 273 ft. long, and is of 1,378 tons register.

The Pacific Whaling Co.'s str. Orion, subsidized as a wrecking steamer by the Dominion Government, reported to the Department of Marine, Feb. 8, that the barque St. James had been rescued from a dangerous position and towed into Bonfield harbor.

The civil suits arising out of the collision between the C.P.R. str. Princess Victoria and the Chehalis, by which the latter was sunk with loss of life, were opened before Justice Martin and two assessors in the B.C. Supreme Court, Feb. 8. The various actions have been consolidated.

The White Pass and Yukon Ry. has chartered its str. La France for the season, to be run on the Forty-Mile River, not previously navigated by steamboats. It is expected that routes will be opened on the Stewart River and other tributaries of the Yukon during the year.

The proposal for the establishment of a steel shipbuilding and repairing plant in British Columbia, includes the consolidation of the B.C. Marine Ry., Esquimalt; the Vancouver Engineering Works, and the New Westminster Foundry, and the construction of a large floating drydock. The works would be located at Vancouver, and it is reported that one of the Clyde shipbuilding firms is interested.

H. Whitaker, who has been running the small str. New Era between Vancouver and Sechert, B.C., for nine years, is having a steamer built in Great Britain for the service. The new steamer will be 100 ft. long, and will have a speed of 12 miles an hour. The New Era, after being given an overhaul, will be utilized to open up a new route from Sechert.

The White Pass and Yukon Ry. has purchased lumber for the construction of a stern-wheel steamer and six barges for the coming season of navigation. The new steamer will be of light draft, for towing, and the barges will run from 106 to 130 ft in length. The company's shops at Whitehorse, Yukon, it is expected, will be opened early in March, when the work of construction will be started.

The Pacific Whaling Co., Victoria, B.C., has declared a dividend of 23% on preferred stock and 16% on common stock, as the result of its operations for 1906. It is proposed to establish new stations at Ezperanza Inlet, and Benman Island. The steam whaler St. Lawrence is now on her way from St. John, N.B., to the Pacific Coast, but Capt. Balcom of the Pacific Whaling Co. says she has not been purchased by that company.

The C.P.R. is considering a proposal to establish a new steamship route from Victoria, calling at ports between that point and Comox, Van Anda, Texada and the logging camps and settlements between Vancouver Island and the mainland as far north as Alert Bay. Capt. Troup, B. W. Greer, E. J. Coyle, and G. L. Courtney, recently returned to Victoria from a trip of inspection to a number of the points proposed to be reached on the projected new route.

A contract is reported let for the construction of the Alaska Steamship Co.'s wharf at Victoria, B.C. It is said that it will be situated on James Bay, and will have an area of 10,000 square feet.; the shed will be 61 by 76 ft., and will contain a baggage room, bonded baggage room and some warehouses. The passengers will reach the steamers by means of an elevated sidewalk from Wharf St. The ticket office and waiting rooms will be on the sidewalk, while underneath it will be a graded drive for the conveyance of freight.

A Vancouver despatch, Jan. 15, stated that Capt. Troup had received information from Liverpool, Eng., that a contract had been let there for the building of a steam freight steamer of about 1,000 tons register, for the company's Northern B.C. and Alaska trade. The same despatch also states that a contract would be placed in Great Britain for a new steamer to alternate with the Princess Victoria. This steamer would be 30 ft. longer and have 6 ft. more beam than the Princess Victoria, but in other respects would be of the same general design.

The Victoria, B.C., Board of Trade has had under consideration the question of pilotage charges at that port. The investigations of a committee which had been looking into the matter, showed that the pilots had been paid $72,500 for services rendered, and $79,200 for services not rendered. Some of the pilots were in favor of cancelling some of the charges, but would not act. As a result of these charges some vessels had stopped calling at Victoria, and there was a danger that all the Oriental liners would shortly discontinue calling at the port. A Royal Commission had made a recommendation by which some relief would be given, and the Board recently adopted a resolution asking the Minister of Marine to have the recommendation enforced.

Notices to Mariners.

The Department of Marine has issued the following notices to mariners:

No. 1. Jan. 24.—British Columbia—1. Vancouver Island, west coast, Quatsino sound, Entrance island, light established. 2. Vancouver island, west coast, Kyuquot sound, Halibut channel, Lookout Island, light established. 3. Strait of Georgia, Malaspina strait, Lund, Ragged Islands, light established. 4. Queen Charlotte Sound, new channel, Christie passage, Balaklava Island, Scarrett point, change in character of light. 5. Chatham Sound, Prince Rupert harbor (Tuck inlet), buoys established.

No. 2. Jan. 25.—New Brunswick—6. South coast, Bay of Fundy, Passamaquoddy bay, St. Andrew's bar, Navy Island, fog bell established at light station. 7. Bay of Fundy, bank reported, soundings reported inaccurate.

No. 3. Jan. 28.—New Brunswick—9. South coast, Bay of Fundy, St. John harbor, Partridge Island, gas-lighted bell boat replaced in position.

No. 4. Feb. 4.—Ontario—Rver St. Lawrence, Thousand Islands, Burnt Island. Wooden lighthouse replaced by gas-lighted beacon. U.S.A.—12.—River St. Mary, old channel lights discontinued.

The following notices have been issued by the U.S. Hydrographic Department:

No. 3. Jan. 19.—St. Mary's River—92. Old channel, lights permanently discontinued.

No. 5. Feb. 2.—Lake St. Clair—205. St. Clair Flats canal, change in buoyage.

The Toronto Navy League has passed a resolution asking the Dominion Government to make an investigation as to what is necessary to be done in order to develop the mercantile marine of Canada.

A number of British men-of-war will visit Canadian waters during 1907. They will include vessels of the First Cruiser Squadron and the Channel Fleet, and will be under the command of Rear Admiral G. Neville, C.V.O.

The items in the proposed Canadian tariff relating to shipbuilding have been allowed to stand over for further consideration. The Government had not thought it expedient to put a tax on British ships, although it might be a debatable point whether such a duty could been forced. Any vessel purchased in the United States and brought to Canada, the Minister of Finance stated, came under the control of the Department of Marine as to inspection, etc. There were other questions which were under the consideration of the Government affecting the shipbuilding interests of Canada, particularly in regard to dredges and the coasting trade, in regard to which some special legislation might be necessary.

"Sub-marine Signals" is the title of an interesting pamphlet issued by the Submarine Signal Co., of Boston, Mass. It gives details of the British Admiralty tests of submarine signalling, opinions of British ship-owners on the system, and a list of vessels equipped with the submarine bell. The following vessels owned in, or trading to Canadian ports, are equipped: C.P.R. steamships, Empress of Britain, Empress of Ireland, Lake Manitoba, Mount Temple, Montreal, Montezuma, Lake Champlain, Lake Erie, Mount Royal, Milwaukee, Montrose, Lake Michigan, Monmouth, Montfort; Dominion Line steamships, Canada and Dominion; Plant Line steamer Halifax; Thomson Line steamer Cervona; Dominion Coal Co.'s steamers, Cacouna, Cape Breton, Bona Vista, Louisburg and Coban; Canadian Government steamers, Canada, Lady Laurier, Lansdowne, Minto, Stanley.

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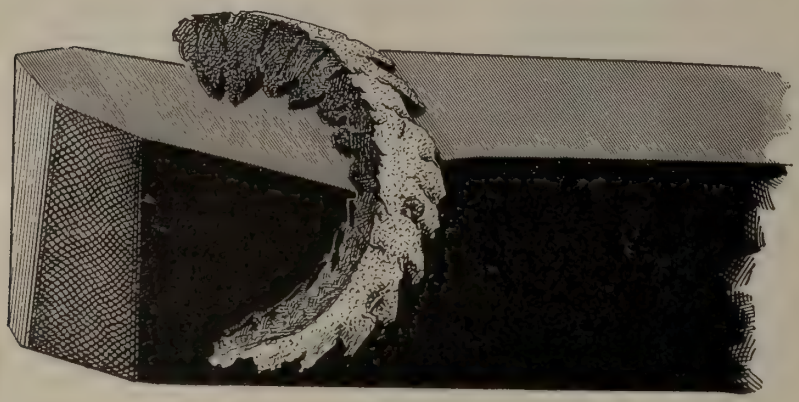

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THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Lake Freight Outlook.

Our Winnipeg correspondent writes as follows: "The outlook for the Canadian grain carriers for the coming season is very promising, as owing to the severe weather experienced throughout the West during this winter, very little grain has been moved from interior elevators to the lake terminals, and as the snow disappears from the grain country floods are bound to take its place, on account of the excessive amount of snow which has fallen during the winter, and of course this will prevent the railways from moving a great deal of wheat before the opening of navigation. The result of all this will be that there will not be very great stocks of wheat at the lakes at the opening; in fact, Canadian tonnage will be able to move everything in sight and there will be no demand for U.S. tonnage at the opening. After the first week or ten days of navigation, the U.S. vessels will commence on their season ore contracts, leaving the movement of the Canadian crop entirely in the hands of the Canadian boats, and as the movement from the interior will be slow it should mean a first-class grain movement over the lakes until well on to the end of July. Owing to the fears of both shippers and vessel men as to the quantity of wheat which will be in the terminals at the opening, the freight market has opened on a very moderate basis, business already having been done at 2c. to Georgian Bay ports, and 7c. to Montreal direct, which rates will probably last until the end of the first month after the opening.

"During the season there will be a number of additions to the Canadian grain fleet, as the new S.S. Midland Prince will be ready for the opening; the Montreal Transportation Co. have ordered two new canal sized vessels in the old country, to be ready for the fall movement; the Farrar Transportation Co. also will have a new 8,000 ton boat ready for the fall, and the Mackays of Hamilton have ordered a boat of the same capacity which they expect to have before the close of navigation this year."

The Trent Valley Canal.

It is semi-officially announced that the Lake Ontario outlet of the Trent Valley Canal will be at Trenton. Surveys have been made of both routes for the Department of Railways and Canals, and the result has been to indicate that Trenton, on the whole, has more in its favor as an outlet than has Port Hope. The surveys show that the difference between the two routes, so far as construction is concerned, is not very material. In this respect Port Hope has a somewhat stronger claim. The distance, compared with Trenton, is somewhat shorter. The cost of construction therefore would be, according to the engineer's report, about $40,000 less to Port Hope than to Trenton. But this does not take into account the land damages and waterpower privileges, in which respect the Trenton route is found to be better. One great factor in favor of Trenton is that barges can be taken from Midland via the Trent Valley Canal to Montreal with perfect safety, being landlocked all the way. If Port Hope had been selected as an outlet these barges would have to be towed for a considerable distance out in the open lake, a rather risky, if not impossible, experiment in severe weather.

The Golspie Disaster.

The coroner's jury which investigated the circumstances attending the death of Sydney Neale, one of the crew of the Hamilton str. Golspie, at Sault Ste. Marie, Ont., returned a verdict that death was due to frost caused by exposure, adding "This exposure was due directly to Capt. Boult, who drove the said Sydney Neale from shelter when he might have protected him; we also think that Mate McLeod thould be severely censured for not sending prompt assistance on his arrival at the mission." The preliminary report to the Government by Capt. T. Donnelly is understood to set out that the vessel was well handled, that no blame attaches to the officers or owners for the wreck, that the owners, R. O. & A. B. Mackay, of Hamilton, did all that could be expected of them under the circumstances and with the information at their command, and that there is no evidence to show that the disaster to the five sailors whose limbs were frozen after the wreck, was increased or added to in any way by delay in sending a tug or by the inability of any departmental officer to do his duty. Capt. Donnelly finds that if the five unfortunate victims of the wreck, totally unused to Canadian winter conditions in such a barren country, had obeyed the instructions of Mate McLeod and remained by their boat, or gone back three miles to the camp by the wreck, where the captain and other officers were, they would not have been frozen. There is, he says, no evidence to show that anyone was refused admission to the camp, and whatever accommodation it provided near the wreck. On arrival at the mission the mate telegraphed Messrs. Mackay brief particulars of the wreck, exactly as written by Capt. Boult. This telegram evidently led the owners of the Golspie to believe, as it stated, that twelve of the men were at Michipicoten, where they would find accommodation. The first intimation Messrs. Mackay received in Hamilton of the real facts of the case was from Capt. Boult's telegram of Dec. 8, asking that a tug be sent from Sault Ste. Marie, or that arrangements be made to get the men there.

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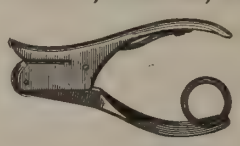

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Richelieu and Ontario Navigation Co.

The following report for the year 1906 was presented at the annual meeting, Feb. 12: The gross earnings were $1,366,299.21, an increase of $148,925.60 over 1905, and the net profit, after providing for fixed charges, interest, etc., $261,040.19. The operating expenses, including extraordinary repairs, were 79.70% of the gross earnings. A dividend of 1¼% was paid Dec. 1, 1906, being at the rate of 5% per annum. The bond issue, originally $571,833.33 now stands at $323,146.71. During the past year the company redeemed $28,226.64 of the issue. The growth of the tourist and local traffic between Montreal, Quebec and the Saguenay makes it necessary to at once provide additional and more modern accommodation. The steamer Quebec has been lengthened, and is being completely rebuilt and remodelled for this service at the company's yards at Sorel, and when finished will be virtually a duplicate of her sister ship the Montreal. The new rapids steamer, the Rapids King, was launched at Toronto on Jan. 9, and every effort will be made to have these boats in commission for the opening of the tourist traffic the coming season. The directors also have under consideration the building of a second rapids steamer to be called the Rapids Queen, and a freight and passenger boat for the Hamilton line. An insurance fund has been created, and $36,000.00 has been set aside out of last year's earnings to the credit of this account, which will be invested in first-class securities. The steamers, hotels, shops, wharves, etc., have been thoroughly maintained. Parliament having granted the company's application for power to issue bonds, a special meeting of shareholders will be held to authorize the issue.

ASSETS.

Steamers, real estate, and buildings, docks, wharves, etc.	$3,823,809.83
Coal, stores, provisions, etc.	102,252.39
Accounts receivable	23,380.23
Cash in bank and on hand	6,498.00
	$3,955,940.45

LIABILITIES.

Capital stock		$3,132,000.00
Bonds 5% sterling	$571,833.33	
Less cancelled	248,686.62	
		323,146.71
Accounts payable		132,688.45
Unclaimed dividends		216.00
Accrued fixed charges		5,385.76
Insurance fund		36,000.00
Surplus		326,503.53
		$3,955,940.45

INCOME ACCOUNT.

Surplus, Dec. 31, 1905	$254,660.05
Net profit for 1906	261,040.19
	$515,700.24
Dividend 1¼% paid Dec. 1, 1906	$ 39,150.00
Insurance fund	36,000.00
Written off	114,046.71
Net Surplus	326,503.53
	$515,700.24

W. Wainwright, Vice-President, occupied the chair in the absence of the President, Hon. R. Forget, and resolutions were passed adopting the report, ratifying the various acts of the directors, and re-electing the directors for the current year. A subsequent special meeting authorized the directors to issue $2,000,000 of bonds, to bear interest not exceeding 5% was passed.

Among the Express Companies.

The Canadian Northern Ex. Co.'s waybill office at Holmfield, Man., has been closed.

The Canadian Northern Ex. Co. has issued complete local and general tariffs to all points reached by its service.

The Canadian Northern Ex. Co. has opened a route on its new branch line from Edmonton to Stony Plains, Alta.

The Great Northern Ex. Co. has placed its service on the St. John's, N.D., branch, which extends into Canada, and has opened offices at Boissevain, Minto and Hayfield, Man.

The G.T.R. is reported to have purchased the property 202 to 220 St. James St., Montreal, to be utilized as city offices for the Canadian, American and National Express companies.

The Toronto and York Radial Ry.'s report for 1906 shows that of its gross earnings 10.7% were from express business on the Metropolitan Division, an increase of 63% over 1905.

The annual drive and dinner of the staff of the Dominion Ex. Co. at Montreal, took place Feb. 9, W. A. Clark, general agent, presiding. Among the guests were V. G. R. Vickers, Superintendent of the Atlantic Division.

S. B. Buller has been appointed acting agent for the Canadian Northern Express Co. at Toronto, where the company has opened an office, in connection with the operation of its service over the Canadian Northern Ontario Ry.

The Canadian Ex. Co. has passed a by-law increasing its capital to the extent of $1,500,000, the whole of which shares have been subscribed for; but no amount had been paid in respect thereof at the time of the deposit of a copy of the by-law with the Secretary of State.

The Dominion Ex. Co. is preparing to erect a shipping and receiving warehouse on the north side of the C.P.R. tracks at Winnipeg. The new building will be situated on the east side of Main st., fronting on the tracks, almost opposite the present baggage and express room, which is to be given over entirely to baggage. The building will be two stories high, and will have 2,500 sq. ft. more storage space on the station level, so that there will be ample space for handling express packages.

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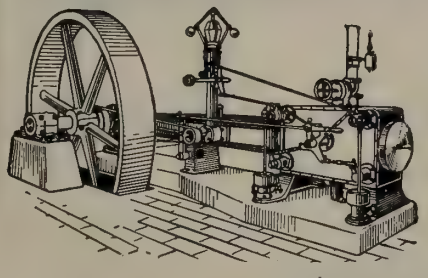

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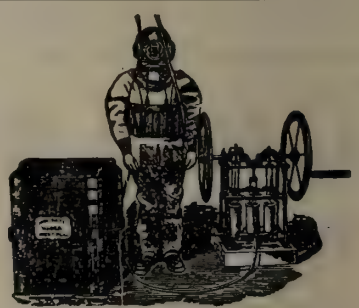

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Telegraph and Cable Matters.

Marconi wireless telegraph apparatus has been placed on board the Dominion Government steamer Montcalm.

The C.P.R. proposes to instal wireless telegraphic apparatus on its Pacific Ocean and Pacific coast steamers.

The Pacific Coast Steamship Co.'s steamboats trading to Vancouver, B.C., are to be equipped with wireless telegraph apparatus.

Dr. H. A. Payzant, for some years surgeon of the cable str. Mackay-Bennett, was presented with an address and a travelling case by the crew on resigning from the service recently.

F. J. Telfer, who was for some years local manager G.N.W. Telegraph Co. at Collingwood, Ont., and latterly has been engaged in Toronto, died somewhat suddenly at the latter place, Jan. 25.

Some question affecting the Pacific cable is responsible for the delay in completing the programme of subjects for the colonial conference for which arrangements are being made in London, Eng.

W. Rutherford was presented recently with a gold locket by the operators on the Western Division C.P.R. telegraphs, on being appointed local manager of Winnipeg city office, in succession to J. W. Baker.

Telegraph huts are being erected between Clo-oose and Pachena Point, at Tsuhiat and Seven Mile Creek, on the Dominion telegraph lines in B.C. Linemen to patrol the coast will be stationed at each hut.

The B.C. Government proposes to have an investigation made into the circumstances attending the placing of the stock of the Canadian Marconi Wireless Telegraph Co. in British Columbia in 1904-05.

The telegraph line to connect the Dominion lines with the Pacific Steam Whaling Co.'s station at Sechart, B.C., has been partly completed. The wire for the 700 ft. span across Effingham Inlet will be shipped at an early date.

J. W. Baker, heretofore local manager C.P.R. telegraphs, Winnipeg, has retired from the service, having been elected a member of the city Board of Control. He is succeeded by W. Rutherford, and W. J. Kane becomes divisional chief operator and circuit manager, in succession to W. Rutherford.

Principal Gordon, of Queen's University, Kingston, Ont., addressing the Empire Club, Toronto, Feb. 7, advocated the construction of an all-British cable, connecting the whole British Empire and operated by the various governments. This would necessitate the construction of a cable from Great Britain to Nova Scotia; a cable from Australia and New Zealand to India, and a third section from India to Cape Town, thence to the West Indies, with branches to Nova Scotia and Great Britain. A telegraph line from Nova Scotia across Canada to connect with the Vancouver-Australia cable would also be necessary.

The Acting-Minister of Public Works stated in the House of Commons, Jan. 25, that wireless telegraph messages were being sent from the Government steamers when in Pictou harbor, N.S., to Prince Edward Island. It was the intention of the Government to build a station on the mainland in connection with the existing station on the Island. This information was elicited in connection with the break in the Anglo-American Telegraph Co.'s cable, which, it is feared, may not be repaired until spring, owing to the presence of ice in Northumberland Straits. A temporary Marconi wireless telegraph station is being erected at Pictou, N.S., by the Dominion Government, to connect with the station at Cape Bear, P.E.I. A permanent station will probably be erected during the summer.

The North American Life Assurance Company

Held its Annual Meeting at its Home Office, in Toronto, on Tuesday, the 29th day of January, 1907. The President, Mr. John L. Blaikie, was appointed Chairman, and the Managing Director, Mr. L. Goldman, Secretary, when the following report was submitted:—

NEW BUSINESS The policies issued for the year, together with those revived, amounted to the sum of $4,364,694, being less than the new business transacted for the previous year. Owing to the conditions prevailing in the life insurance business on this continent, the Directors considered that in the interests of the policyholders the reduction in expenses was of greater importance than expansion in new business, and in this respect the Statement presented shows they have been eminently successful, by making the very large reduction of about five per cent. in one year in the ratio of expenses to premium income. This percentage of reduction has resulted in the material saving in expenses of $48,996.49, as compared with the previous year.

SAVING IN EXPENSES

CASH INCOME The cash income for the year from Premiums, Interest, etc., was $1,746,544, showing the satisfactory increase for the year of $86,480.94.

PAYMENTS TO POLICY-HOLDERS The amount paid on policyholders' account was $589,195.68, and of this amount the sum of $306,179.33 represents payments for dividends, matured endowments, etc.

ASSETS The assets increased during the year by the sum of $831,050.79, and now amount to $7,799,064.45.

ADDITION TO RESERVE After making ample provision for all liabilities, including special addition to the reserve fund, and paying a relatively large amount for dividends to policyholders during the year, there was a handsome addition made to the net surplus, which now amounts to $650,209.08, the year's work from the financial standpoint being the best in the Company's history.

NET SURPLUS INCREASED

ASSETS SAFELY INVESTED The assets of the Company have been, as heretofore, invested in the best class of securities; a detailed list of these will be published with the Annual Report for distribution.

FULL REPORT SENT TO GOVERNMENT As heretofore, the Company's books were closed on the last business day of the year, and in due course full reports with detailed list of the securities held by the Company were sent to the Government.

MONTHLY AUDIT A monthly examination of the books of the Company was made by the Auditors, and at the close of the year they made a thorough scrutiny of all the securities held by the Company. In addition to the examination of the securities by the Auditors, a Committee of the Board, consisting of two Directors, audited these securities each quarter.

Owing to Dominion Legislation providing that judges should not be Directors of corporations, the First Vice-President, Hon. Sir William R. Meredith, K.C., who had been associated with the Company for many years, much to its advantage, felt compelled to resign his position on the Board of the Company, and the Directors accepted the same with great reluctance.

It will be the duty of this Meeting to elect a Director to fill the vacancy thus created.

The Insurance Legislation enacted in New York State, which went into effect January 1st, 1907, had the effect of our Managers and Agents there declining to accept the statutory terms of remuneration, and it was therefore found necessary to cease writing new business in the State. Provision has been made at the Syracuse office to look after the interests of Policyholders in that State, while the large deposit will remain there for the security of Policyholders in the United States.

The care and attention manifested in their duties by the Company's Officers, Provincial Managers, Inspectors, District Agents, and all other Agents, are deserving of the highest commendation.

L. GOLDMAN, Managing Director.

J. L. BLAIKIE, President.

The Annual Report, showing marked proofs of the solid position of the Company, and containing a list of the securities held, and also those upon which the Company has made collateral loans, will be sent in due course to each policyholder.

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ROBERT W. HUNT & COMPANY, ENGINEERS

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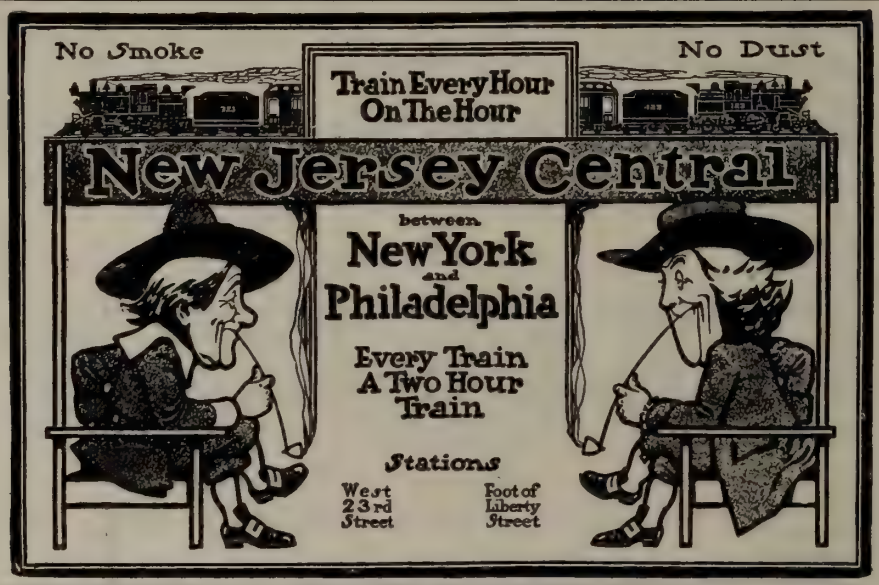

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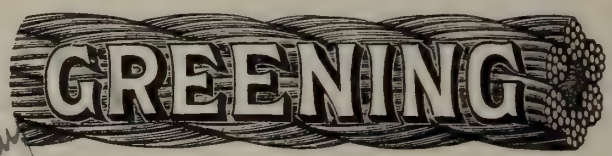

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General Telephone Matters.

The Bell Telephone Co. is considering plans for carrying its long distance lines into Edmonton, Alta.

The Canadian Independent Telephone Co. is applying to the Chatham, Ont., City Council for a franchise.

The New Brunswick Telephone Co. has elected Dr. Stockton as President, succeeding the late Hon. A. G. Blair.

The New Brunswick Telephone Co. proposes to move its offices in Woodstock, N.B., into its own building on Queen St., May 1.

The Bell Telephone Co.'s agency at Arnprior, Ont., was burned out Jan. 24, and caused a day's interruption of the service.

The farmers in the vicinity of Neepawa, Man., are organizing for the purpose of constructing a telephone line to Springhill, Man.

The Falkirk Telephone Co. has been granted permission by the municipality of London tp., Ont., to erect telephone posts on the township roads.

The Bell Telephone Co. is replacing its underground cables on a number of streets in Ottawa with larger ones, to meet the demands of increasing business.

The telephone operators in Montreal, where there are two companies carrying on business, to the number of about 700, have joined the Electrical Workers' Union.

The St. Catherine and St. Bazile Telephone Co. has opened a public pay station at St. Bazile Station, Que. At St. Bazile, connection is made with the Bell Telephone Co.'s system.

A company, of which J. H. Kelly is President, is constructing a telephone line between Metapedia and Gaspe Basin, Que., 180 miles, and expects to have it in operation early in the summer.

W. E. Smith, Treasurer of the New Brunswick Telephone Co., Fredericton, N.B., was suspended Jan. 28, it being alleged that an examination of his books showed shortage of about $25,000.

The Bell Telephone Co.'s gross receipts in Toronto for 1906, were $791,682, and in Ottawa, $148,114.78. These figures have been reported by the company under the terms of the law as to the taxation of companies.

A bill has been presented in the Ontario Legislature, seeking to have it declared that no "female person" shall be permitted to work at telephone exchanges in places of over 5,000 inhabitants for more than five hours a day.

The Bell Telephone Co.'s switchboard at its London, Ont., exchange was burned out, Jan. 24, owing to a line which was under repair falling across one of the London St. Ry. Co.'s power wires. The damage was estimated at over $10,000.

The Ontario Legislature has been asked by the Toronto City Council to submit to a general vote the question of the Government constructing and operating trunk telephone lines, the municipalities to have the right to operate the local telephones.

The annual report of the Melita-Arthur Telephone Co., for 1906, shows a profit of 30% on the capital invested, which it was decided to utilize in the payment of a 20% dividend to shareholders, and the appropriation of 15% to a rest account.

The Winnipeg City Council has asked the Manitoba Government to allow it a year, from April 1, to decide whether it will construct a municipal telephone system. The Government desired municipalities to decide this question by April 1 of the current year.

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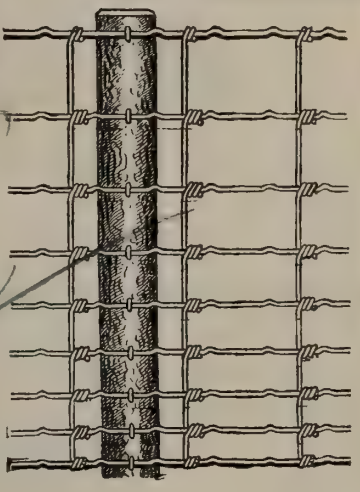

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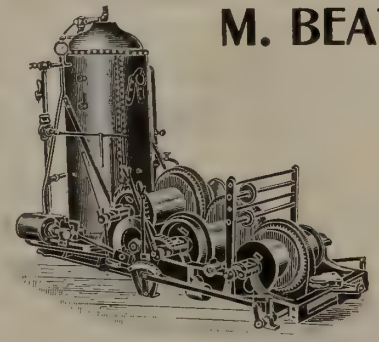

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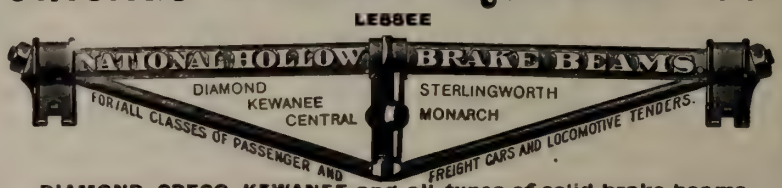

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Fort Saskatchewan, Alta., asked the Edmonton City Council to reduce its telephone rate from $24 to $15 for business places, and $10 for houses, and the Mayor of Edmonton ordered the service to be discontinued. The Fort Saskatchewan Town Council is getting estimates as to the cost of a municipal service.

The building for the College exchange of the Bell Telephone Co., in Toronto, is expected to be opened at an early date. The new building is situated at the corner of Bellevue Avenue and Oxford St., with a frontage of 55 ft. and 120 ft. respectively, and is of brick, three stories and basement. The lines are brought into the building by underground cables.

The Ahmic Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $25,000 and offices at Ahmic Harbor, Ont., for the purpose of carrying on a telephone business in the district of Parry Sound. The provisional directors are: W. Robertson, Dunchurch, Ont.; E. C. Bennett, S. G. Ritter, W. J. Snaith, J. Brown, Ahmic Harbor, Ont.; R. J. Watson, D. R. McLean, Burk's Falls, Ont.

The Calgary, Alta., Board of Trade has been informed that the Bell Telephone Co.'s lines are nearing Macleod; that it proposes to construct lines to Lethbridge, Alta., and to Cranbrook, where connection will be made with other points in British Columbia. The line from Winnipeg was expected to be strung to Medicine Hat, Sask., at an early date, and from thence it would be at once taken on to Calgary.

The Union of Alberta Municipalities at its recent convention at Red Deer discussed the telephone situation and reaffirmed the resolution passed in 1905, that the Government should own the long distance lines. and the municipalities the local systems; while the Alberta Farmers' Association, at its convention at Calgary, expressed itself by resolution in favor of the appointment of an independent commision for the management and control of telephone lines.

Papers are being prepared in connection with the incorporation of a new telephone company in New Brunswick, which will construct and operate long distance toll lines, and will promote the establishment of local exchanges under municipal control. The proposed capital is $500,000 and about $150,000 is reported to have already been subscribed. A. T. Pearson, heretofore General Manager of the Central Telephone Co., is actively promoting the new company.

W. L. M. King, Deputy Minister of Labor, Ottawa, and County Judge J. Winchester, Toronto, were appointed Commissioners by the Dominion Government to investigate and report in the matter of the dispute between the employes of the Bell Telephone Co. of Canada at Toronto and the company. The Commissioners sat for the hearing of evidence at Toronto for a number of days, and took evidence not only as to the recent strike of the operators, but also in regard to a number of other matters affecting the company's operation. A report will be presented to the Government.

The Bell Telephone Co. assented to a proposition of the Winnipeg City Council that it should be assessed at $200,000, and a clause to this effect was put in the act amending the city charter now before the Manitoba Legislature. The clause in the bill has been altered to read $500,000 and to this the company objects. The city electrician values the company's plant at $915,200, and a member of the house said the company's estimate of $130 per telephone as the cost of installation would bring up a valuation of about $900,000. It was stated that the company paid $7,000 yearly in taxes to the city and the Government, about 15% of its net revenue, which would be doubled if the proposal were approved. It was computed that about 20,000 calls a day were made in Winnipeg by the general public from whom the company did not receive a cent of revenue.

Canadian Pacific Railway Company.

Dividends for the half-year ended 31st December, 1906, have been declared as follows:

On the Preference Stock, Two per cent.

On the Common Stock, Three per cent.

A further sum equal to one-half of one per cent. on the Common Stock will be paid thereon at the same time out of interest on the proceeds of land sales.

Warrants for the common stock dividend will be mailed on or about April 2nd next to Shareholders of record at the closing of the books in Montreal, New York and London, respectively.

The Preference Stock Dividend will be paid on Tuesday, April 2nd next, to Shareholders of record at the closing of the books at the Company's London Office, No. 62 Charing Cross, London, S.W. The Common Stock Transfer Books will close in Montreal, New York and London at three p.m. on Friday, March 1st.

The Preference Stock Books will also close at three p.m. on Friday, March 1st.

All books will be reopened on Wednesday, April 3rd next.

By Order of the Board.

CHARLES DRINKWATER,
Secretary.

Montreal, 11th February, 1907.

Canadian Northern Ontario Railway.

NOTICE is hereby given that application will be made to the Parliament of Canada at the next session thereof for an act amending the acts relating to the Canadian Northern Ontario Railway Company (formerly the James Bay Railway Company), as follows:—

Authorizing the construction of the following line of railway—

(j) From Parry Sound northeasterly to North Bay.

GERARD RUEL,
Assistant Solicitor

Toronto, Feb. 14th, 1907.

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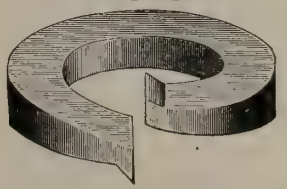

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The matter will be fully considered by the committee of the Legislature before a decision is arrived at.

Port Arthur Municipal Telephones.

Following is the financial statement of the Port Arthur, Ont., town telephone department from Jan. 1 to Dec. 15, 1906:

INCOME

Receipts from commercial subscribers	$3,969.15	
Receipts from residence subscribers	4,824.80	$ 8,793.95
Sale of desk sets, etc.		140.00
Accounts due Dec. 15, 1906.		1,943.50
Stock on hand Dec. 15, 1906.	197.45	
Stock on hand Dec. 31, 1905.	107.40	90.05
		$10,967.50

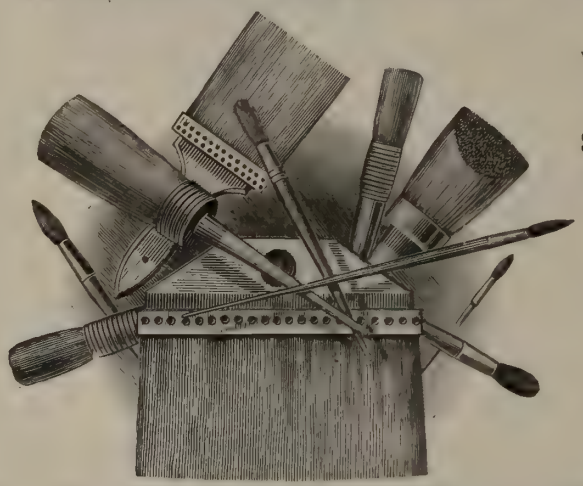
EXPENDITURE

Superintendence	$ 627.50	
Rent	176.00	
Insurance	43.45	
Miscellaneous and repairs	2,520.56	
Printing, advertising and stationery		3,367.51
		55.17
Operators' salaries		1,850.00
Secretary-Treasurer and proportion salaries clerical staff		522.50
Proportion rent town office		154.00
Estimated half month		247.85
Telephone debenture coupon interest		2,268.45
Depreciation 5% on receipts.		446.69
Balance gain		2,055.33
		$10,967.50

EXPENDITURE ON CAPITAL ACCOUNT, 1906.

Telephone construction	$9,150.43
" instruments	1,162.10
Changing system	183.81
	$10,496.34

WOLFE BRUSH COMPANY



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Cold Storage Insulations
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Canada Foundry Co.....Toronto.
Canadian Westinghouse Co.....Hamilton, Ont.

Air Compressors
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.

Ales
E. L. Drewry.....Winnipeg.

Axes
James Smart Mfg. Co.....Brockville, Ont.

Axe Steel
Montreal Steel Works.....Montreal.

Axles
James Hutton & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.

Badges
R. Woodman Mfg. & Supply Co....Boston, Mass.

Baggage Checks
R. Woodman Mfg. & Supply Co....Boston, Mass.

Bearings, Side
Chicago Railway Equipment Co.....Chicago, Ill.

Belting, Rubber
The Canadian Rubber Co. of Montreal.

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Standard Explosives Limited.....Montreal.

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Carbolite Carbolineum Co.....Toronto.

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Mica Boiler Covering Co.....Montreal.

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Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
E. Leonard & Sons.....London, Ont.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst, N.S.

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Robb Engineering Co.....Amherst, N.S.

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Canada Foundry Co.....Toronto.
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Robb Engineering Co.....Amherst, N.S.

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Babcock & Wilcox (Ltd.).....Montreal.
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Bolsters
Dominion Car and Foundry Co.....Montreal.

Bolts, Bridge
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Bolts, Carriage and Machine
Toronto Bolt and Forging Co.....Toronto.

Bolts, Track
Canada Foundry Co.....Toronto.
Nova Scotia Steel & Coal Co...New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

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The Derry-Collard Co.....New York City.

Box Car Loaders
W. H. C. Mussen & Co.....Montreal.

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The B. Greening Co.....Hamilton, Ont.

Bridge Numbers
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Bridges
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
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Cyclopean Iron Works Co.....Jersey City, N.J.

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McCord & Co.....Chicago, Ill.
Mechanical Mfg. Co.....Chicago, Ill.

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Cables, Electric and Feeder
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Caboose Heaters
Geo. R. Prowse.....Montreal.

Caps
W. H. Coddington.....Hamilton Ont.

Car Castings
American Brake Shoe & F'dry Co...Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Car Closets
Duner Co.....Chicago, Ill.

Car Fittings
The Robert Mitchell Co.....Montreal.

Car Furnishings
G. S. Wood.....Chicago, Ill.

Car Heating
Wm. C. Baker Heating & Supply Co..New York.
Gold Car Heating and Lighting Co....New York.
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F. H. Hopkins & Co.....Montreal.
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Alexander Car Replacer Mfg. Co....Scranton, Pa.
N. J. Holden Co.....Montreal.
F H. Hopkins & Co.....Montreal.

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R. Woodman Mfg. & Supply Co....Boston, Mass.

Car Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

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Crossen Car Mfg. Co.....Cobourg, Ont.
Dominion Car and Foundry Co.....Montreal.
J. T. Gardner .....Chicago, Ill.
Rhodes, Curry & Co.....Amherst, N.S.

Car Upholstery
N. J. Holden Co.....Montreal.

Car Windows
O. M Edwards.....Syracuse, N.Y.

Castings
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Canadian Bronze Co.....Montreal.
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Kerr Engine Co.....Walkerville, Ont.
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Castings, Iron
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.

Castings, Iron and Steel
American Brake Shoe & F'dry Co...Mahwah, N.J.

Castings, Steel
Canadian Iron and Foundry Co.....Montreal.
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Montreal Steel Works.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.

Cast-Steel Hammers
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Cast-Steel Track Tools
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cast-Steel Wrenches
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The W. H. Kelson Co.....Montreal.
T. A. Morrison & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Vulcan Iron Works Co.....Toledo, Ohio.

Contractors' Supplies
Cyclopean Iron Works Co.....Jersey City, N.J.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Conveyors, Coal and Ash
Babcock & Wilcox (Ltd.).....Montreal.

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Geo. R. Prowse.....Montreal.

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Continental Iron Works.....Brooklyn, N.Y.

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Wolfe Brush Co.....Pittsburg, Pa.

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National Malleable Castings Co...Cleveland, Ohio.
Washburn Steel Castings & Coupler Co.,
.....Minneapolis, Minn.

Couplers, Hose
Chicago Pneumatic Tool Co.....Chicago, Ill.

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Canadian General Electric Co.....Toronto.

Cross Arm Braces
Canadian General Electric Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Crossing Gates
The N. L. Piper Railway Supply Co.....Toronto.

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Toronto Bolt and Forging Co.....Toronto.

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Steel Concrete Co. (Ltd.).....Montreal.

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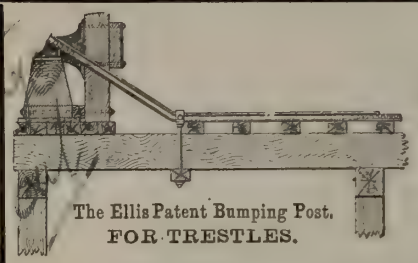

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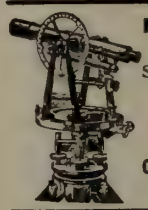

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Standard Steel Works.....Philadelphia, Pa.

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W. H. C. Mussen & Co.....Montreal.
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Duner Co.....Chicago, Ill.

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Hose, Suction
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Chicago Pneumatic Tool Co.....Chicago, Ill.

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McCord & Co.....Chicago, Ill.

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Wolfe Brush Co.....Pittsburg, Pa.

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Canadian Westinghouse Co.....Hamilton, Ont.

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Launches
Polson Iron Works.....Toronto.

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W. H. C. Mussen & Co.....Montreal.

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American Brake Shoe & F'dry Co..Mahwah, N.J.
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Canadian Fairbanks Co.....Montreal.

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Canadian Locomotive Co.....Kingston, Ont.
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Locomotives (Electric)
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Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

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Canadian Locomotive Co.....Kingston, Ont.
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H. K. Porter Co.....Pittsburg, Pa.
Vulcan Iron Works.....Wilkesbarre, Pa.

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McCord & Co.....Chicago, Ill.

Machine Tools
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Canadian Fairbanks Co.....Montreal.
H. W. Petrie.....Toronto.

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John Morrow Machine Screw Co.....Ingersoll.

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Sheriffs Mfg. Co.....Milwaukee, Wis.

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Sheriffs Mfg. Co.....Milwaukee, Wis.

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Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
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Canadian Iron and Foundry Co.....Montreal.

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Rice Lewis & Son.....Toronto.

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W. Abbott.....Montreal.

Milling Machines
H. W. Petrie.....Toronto.

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H. W Petrie.....Toronto.

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Canada Cycle & Motor Co., Toronto Junc., Ont.

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The Orford Copper Co.....New York.

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Positive Lock Washer Co.....Newark, N.J.

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S. F. Bowser & Co., Inc.....Toronto.
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Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.
Packing
The N. L. Piper Railway Supply Co....Toronto.
Packing, High Pressure Sheet
The Canadian Rubber Co. of Montreal.
Packing, Piston
The Canadian Rubber Co. of Montreal.
Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.
Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.
Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.
Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.
Paints
Canadian Oil Co.....Toronto.
Paints, Damp Resisting
E. F. Dartnell.....Montreal.
Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.
Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co, .New York.
Pipe Covering
Canadian Fairbanks Co.....Montreal.
Mica Boiler Covering Co.....Montreal.
Pipe Stocks
Butterfield & Co.....Rock Island, Que.
Planers
H. W. Petrie.....Toronto.
Platforms, Steel
Standard Coupler Co.....New York City.
Plating Compositions
F. B. Stevens.....Detroit, Mich.
Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Plumbago
F. B. Stevens.....Detroit, Mich.
Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N J. Holden Co.....Montreal.
Polishers' Supplies
F. B. Stevens.....Detroit, Mich.
Polishing Compositions
F. B.Stevens.....Detroit, Mich.
Porter
E. L. Drewry.....Winnipeg.
Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.
Power Houses
Steel Concrete Co. (Ltd.).....Montreal.
Preservative for Hose
G. S. Wood.....Chicago, Ill.
Preservative for Wood
Carbolite Carbolineum Co.....Toronto.
Printing
The Hunter, Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.
Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.
Pumps
S. F. Bowser & Co., Inc.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.
Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.
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F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
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J. J. Gartshore.....Toronto.
Rails (for relaying)
F. H. Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
T. A. Morrison & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
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Continuous Rail Joint Co. of Canada...Montreal.
N. J. Holden Co.....Montreal.
Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.
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Reamers
W. Abbott.....Montreal.
Butterfield & Co.....Rock Island, Que.
Receivers, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.
Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.
Refrigerators
Geo. R. Prowse.....Montreal.
Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.
Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.
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Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
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F. H. Hopkins & Co.....Montreal.
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Crossen Car Mfg. Co.....Cobourg, Ont.
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O. M Edwards.....Syracuse, N.Y.
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J. W. Townsend.....Halifax, N.S.
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F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Screw Plates
Butterfield & Co.....Rock Island, Que.
Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.
Semaphore Arms
Acton Burrows Limited.....Toronto.
Semaphores
The N. L. Piper Railway Supply Co....Toronto.
Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.
Shade Rollers
O. M. Edwards.....Syracuse, N.Y.
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The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
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Polson Iron Works.....Toronto.
Shop Furnaces
Railways Materials Co.....New York.
Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....
Side Bearings
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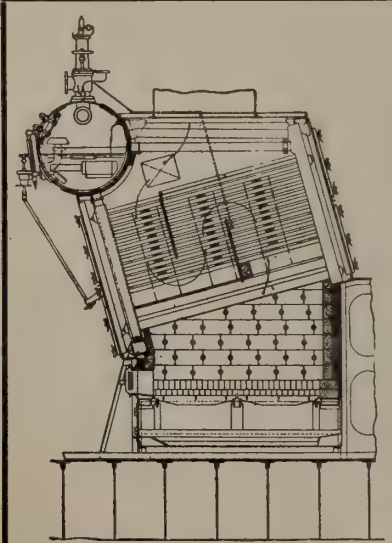
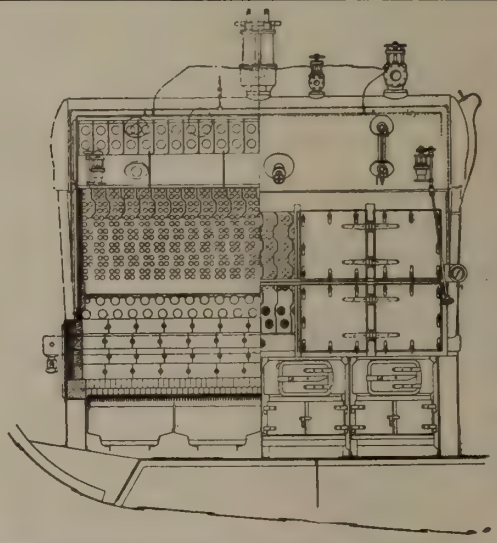

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N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

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Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

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F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seals
James Smart Mfg. Co.....Brockville, Ont.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

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Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston, Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Tool Steel
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Rubber
The Canadian Rubber Co. of Montreal.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Woodworking Machinery
H. W. Petrie.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

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Old Series, No 192
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TORONTO, CANADA, APRIL, 1907

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KINGSTON, ONT.,

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H. W. PETRIE Write for my monthly STOCK LIST containing list of all kinds of NEW AND SECOND-HAND **MACHINERY**

TORONTO AND MONTREAL

(SEE ADVERTISEMENT ON PAGE [illegible])

McCaskill, Dougall & Co., Railway Varnishes, Japans and Enamels, Montreal. MANUFACTURERS EIGHT MEDALS AWARDED

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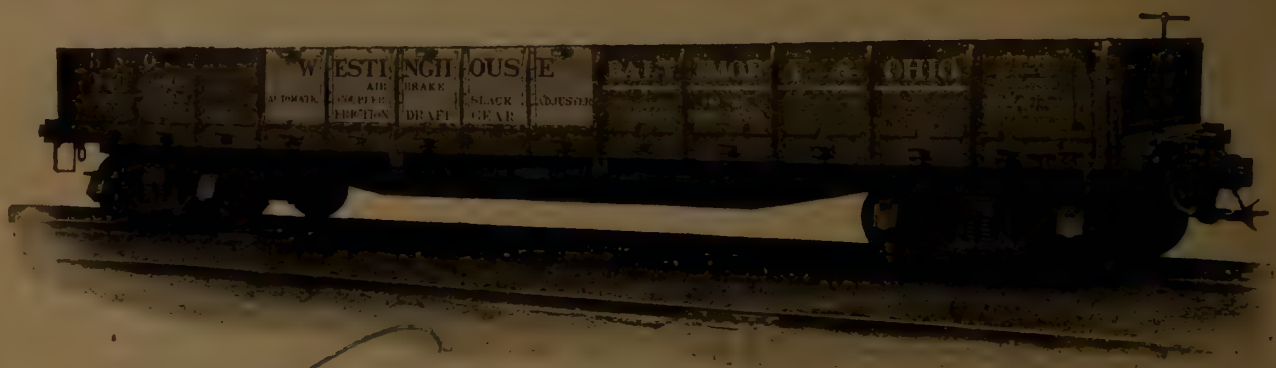
Type "K" Freight Triple

Quick Recharge—Graduated Release



50-Ton Steel Frame Gondola Car, equipped with Type "K" Triple Valves

Over 30,000 Type "K" Triples ordered since October 1st, 1906

No better testimony could be given to prove appreciation by railroad managers. Several of the largest roads have adopted the Type "K" Triple as standard for freight service; you will find it a profitable investment to do likewise.

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WINNIPEG

134 Granville Street
HALIFAX

See Purchasing Agents' Guide on page 297

See Alphabetical Index to Advertisements on page 261.

THE

Railway and Marine World

With which are incorporated The Western World and The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' interests

Old Series, No. 192.
New Series, No. 110.

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Subscription, $1 a Year.
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The Question of Passenger Rates.

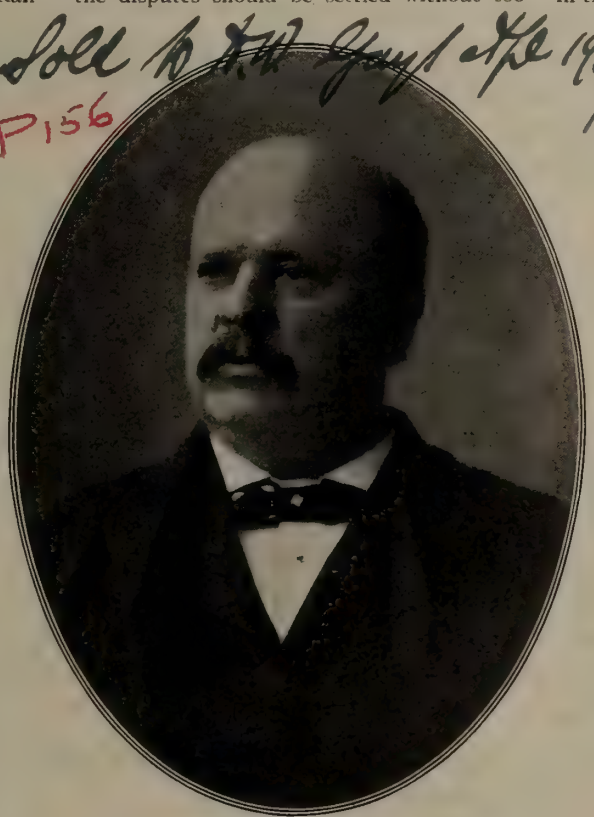
When in the House of Commons recently, R. L. Borden submitted a resolution to the effect that it is expedient that the Board of Railway Commissioners enquire and report whether or not the tolls charged in standard passenger tariffs should be reduced so as not to exceed 2 cents a mile; and that the Government take such steps as are necessary to have the enquiry made, the Minister of Railways said the problem was one presenting many difficulties. The question is: Are the Railway Commissioners attending to their duties with regard to the question of passenger tariff rates? This Parliament delegated to them the power and authority to regulate the passenger tariff rates throughout Canada. That power was given to them in 1903. Have they endeavored to carry out the mandate that was given to them? The following letter had been addressed by A. C. Killam, Chief Commissioner, to the Premier on the subject:

"I have perused the official report of the recent debate in Parliament upon Mr. Maclean's Bill for the amendment of the Railway Act, and desired to lay before you some considerations on the subject.

"The extension of the Board's jurisdiction to sleeping cars, as well as the former extension to the express companies, seems natural. The addition of the telephone and telegraph systems does not follow so naturally, but this is a matter of policy, upon which I desire to make but one observation. The Board should not be asked to perform this additional work, and, at the same time, to exercise more expeditiously than before the jurisdiction which it was originally created to exercise. I have noted that some of the speakers appeared to think that the Board has been, in some respects, dilatory, but that this has usually been ascribed to the pressure of business.

"The Board's work is continually increasing at a rapid rate. Many circumstances prevented our attending to it with the expedition that could be desired. The recent additions to our staff have enabled us to put the record department in order. We are promised an early addition to our office space. We hope with these changes and some further increases of the staff, which will soon be required, to have the ordinary work of the Board so systematized that it will be carried on without the delays and oversights that, unfortunately, have sometimes occurred heretofore. We have proceeded upon the policy that it was important to determine, as soon as reasonably possible, the different applications and complaints made to us.

"I notice that the criticism has been passed that considerable attention has been devoted to disputes between railway companies, rather than to matters affecting the public interest. These disputes, however, generally relate to matters which are necessary to be determined in order to facilitate the construction of new lines or to matters which affect the safety of the public, and in both these classes of cases, it is important in the public interest, that the disputes should be settled without too much delay. The Board has also initiated proceedings for the consideration of several subjects of an important nature upon which it expects in the near future to make such orders or regulations as may seem to be within its powers, and to be needed in the public interest; and it may be obliged to ask for the interference of Parliament either by direct legislation or by adding to the powers of the Board. We have also asked the Minister of Justice to give us legal assistance for the purpose of investigating the positions of the telephone companies and express companies over which we have been given jurisdiction, in order to enable us, with as little delay as possible, to determine how far we should approve the tariffs which those companies submit to us.



H. W. GAYS,
General Manager Ottawa and New York Ry.

"The scheme of the Railway Act, 1903, in regard to railway tariffs was that the railway companies should submit to the Board for approval their maximum mileage rates for both freight and passenger traffic, and that they might then make special tariffs providing for tolls no greater than those embodied in the authorized maximum tariffs. In order to put affairs in working order under the Act, it became necessary for the Board to approve without the delay which would be required for serious inquiry, the maximum tariffs submitted by the companies, which were generally, I believe, based upon the rates previously authorized. It has always been my idea, since I joined the Board and became conversant with the systems and the circumstances, that as soon as possible the Board should make full inquiry for the purpose of enabling it to judge whether the maximum rates thus arrived at are too high. The subject is a very difficult one. No principle has yet been established for the determination of such a question. In parts of the U.S. it has been attempted to be solved by a valuation of the railway property based upon an estimate of the cost of reproduction, and an estimate of the reasonable return to be allowed, over and above the cost of operation and maintenance and other necessary expenses. The Board of Railway Commissioners for Kentucky have recently established a set of rates for traffic within the state upon that basis. In the state of Washington they are now having a valuation made of the railway property for a similar purpose, and an eminent engineer has been employed on high salary to do the work. A similar valuation of railway property in Canada would be an enormous task. It is one which, up to the present time, the Board's staff has not been able to undertake. The work involved in the proposed investigation of the affairs of telephone and express companies will be considerable, but it will be very little as compared with a similar work in regard to railway companies and their properties.

"Recently applications were made to the Board by the C.P.R. Co. and the Canadian Northern Ry. Co., for approval of standard passenger tariffs for new lines in Ontario at rates of 3½c. per mile, and in respect of these the Board laid down the principle that it would not approve of such tariffs at higher rates than 3c. per mile in the well-settled portions of eastern Canada, and these tariffs have been modified accordingly. The C.P.R. Co. has also recently applied to the Board for the approval of standard tariffs for some

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Is pure water white in color; high fire test; low cold test, and splendid gravity.

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CHARLES MILLER,

PRESIDENT.

of its branch lines in the northwestern provinces at rates of 4c. per mile, but the Board refused to approve of higher rates than 3½c. per mile for those lines, announcing as its opinion that the time had not yet come when it could properly insist upon the rates in the Northwest being reduced to the level of those in Eastern Canada. The result has been that after some conference between the Traffic Officer of the Board and the traffic officials of the C.P.R., the company has agreed to reduce all its standard passenger tariff rates on the Calgary and Edmonton Ry., and lines east thereof in Alberta, to the rate of 3½c. per mile after Dec. 1 next, and the Board has approved of the rate of 4c. per mile only until that date. The interval has been allowed for completing the necessary details. The Board has not felt that, without careful inquiry, it was warranted in going farther than this.

"It appears to me that the question of extensive reductions in passenger rates cannot well be taken up by itself. If it be ascertained that railway companies are charging rates which afford them greater profits than they should reasonably be allowed to receive, it will be important to determine whether the reduction should be made upon passenger traffic, or upon freight traffic, or upon both. If they are not receiving greater profits than they should have, then any reduction in their net earnings from passenger traffic should be made up by the allowance of an increase in such earnings from freight traffic. The members of the Board have not now at their command such information as would enable them reasonably to determine whether railway earnings are greater than they should be, or if they are, from what portion of their traffic reductions in rates should be made. The Traffic Officer of the Board is the official upon whom the Board relies for procuring the necessary information, and for advising it upon all questions of rates. That official is now overworked. The addition of telephone and express companies to the jurisdiction of the Board has already added considerably to the work of his department, and particularly to the work with which he has personally to deal. Upon him the Board has had to rely for the settling of details necessary for the new system. I have suggested to him that he should endeavor to ascertain whether a reliable assistant for himself can be obtained. He informs me that the demand for men of a high class in the railway companies' traffic departments is so great that it would be very difficult, if not impossible, to obtain the services of such an assistant at present.

"It appears to be probable that Parliament or the Railway Committee of the House of Commons will be asked to require the Board to report upon the question of reducing standard passenger tariff rates to 2c. per mile. I desire to urge that the Board should not be required to report upon this question within any limited time, or during the present session of Parliament. We will have soon to decide upon the telephone and express companies' tariffs. We have many important questions which, according to our programme, are to be taken into consideration in the near future. We have much pressing current business. I do not think that it would be possible for us to decide in a brief period of time with satisfaction either to ourselves or to Parliament or the country, upon the important question of the reduction of passenger tolls generally. Our Traffic Officer has already, on his own responsibility and without the instructions of the Board, suggested to the general passenger agents of the C.P.R. Co. and the G.T.R. Co. that they should lower to the rate of 3c. per mile all the passenger tariffs in eastern Canada which provide for higher rates; but they object to this, claiming that their average rates at present are about 2c per mile; and, at the request of the Traffic Officer, they have promised to submit statements in support of their contention. If left to consider the matter in our own way, it is not unlikely that we will see our way to procuring the reduction to 2c. per mile.

"I would, therefore, respectfully urge that the Government should not, at present, countenance the proposal to refer to the Board the question of reducing the rates as proposed by Mr. Maclean's bill, but that the whole matter should be left at large, at least until the next session of Parliament, and the Board left in the meantime, to exercise its discretion unfettered by any order or reference."

There was a good deal of discussion on the motion, which was finally talked out.

April Birthdays.

Many happy returns of the day to—

J. A. Armstrong, Chief Train Dispatcher C.P.R., Ottawa, born at South Durham, Que., April 6, 1863.

Adam Brown, formerly President Wellington, Grey and Bruce Ry. (now G.T.R.), Vice-President G.N.W. Telegraph Co., and Postmaster of Hamilton, born at Edinburgh, Scotland, April 3, 1826.

A. Buchanan, Superintendent of Motive Power, Central Vermont Ry., St. Albans, Vt., born at New York City, April 3, 1870.

W. J. Camp, Electrical Engineer C.P.R. Telegraphs, Montreal, born at Oakville, Ont., April 22, 1855.

A H. Clark, Master Mechanic Irondale, Bancroft and Ottawa Ry., Irondale, Ont., born April 5, 1867.

A. E. Edmonds, District Passenger Agent C.P.R., Detroit, Mich., born at Woodstock, Ont., April 8, 1866.

J. H. Flock, K.C., Honorary Counsel Canadian Ticket Agents' Association, London, Ont., born at Toronto, April 6, 1834.

B. W. Folger, Manager Niagara Navigation Co., Toronto, born at Kingston, Ont., April 8, 1872.

W. E. Fowler, Master Car Builder C.P.R., born at Weymouth, Dorsetshire, Eng., April 27, 1856.

G. H. Garden, C.E., Chief Engineer Alberta Ry. and Irrigation Co., Lethbridge, Alta., born at Woodstock, N.B., April 5, 1849.

F. A. Gascoigne, Car Accountant C.P.R., Montreal, born at Gosport, Hants, England, April, 1866.

J. P. Gay, Manager G.T. Despatch Fast Freight Line, Detroit, Mich., born at Hamilton, Ont., April 26, 1857.

B. C. Gesner, formerly Air Brake Inspector I.C.R., now travelling representative Galena-Signal Oil Co., born at Cornwallis, N.S., April 23, 1859.

A. L. Hertzberg, Engineer Maintenance of Way, C.P.R., Montreal, born in Norway, April 30, 1855.

E. J. Hilliard, Commercial Agent G.T.R., Buffalo, N.Y., born at Montreal, April 14, 1870.

J. M. Horn, city freight agent Canadian Northern Ry., Winnipeg, born at Schoots, Lanarkshire, Scotland, April 12, 1880.

E. A. James, Manager Canadian Northern Ry., Winnipeg, born in London, Eng., April, 1865.

B. S. Jenkins, General Superintendent C.P.R. Telegraphs, Winnipeg, born April 8, 1859.

J. S. Lawrence, Superintendent C.P.R., Nelson, B.C., born at Toronto, April 9, 1863.

D. McNicoll, Vice-President C.P.R., Montreal, born at Arbroath, Scotland, April 7, 1852.

P. Mooney, General Freight and Passenger Agent, Halifax and South Western Ry., Halifax, N.S., born at St. Catherines, Que., April 19, 1871.

W. A. Ritchie, District Superintendent The Pullman Co., Montreal, born at Edinburgh, Scotland, April 13, 1854.

E. V. Skinner, Assistant Traffic Manager C.P.R., New York, born in London, Eng., April 22, 1849.

A. M. Sutherland, Assistant Superintendent Duluth, South Shore and Atlantic Ry., Thomaston, Mich., born at Hartford, Conn., April 2, 1844.

J. R. VanCleve, Master Mechanic, Alaska Central Rd., Seward, Alaska, born at Little Falls, Minn., April 6, 1859.

W. Wainwright, General Assistant and Comptroller G.T.R., Montreal, born at Manchester, Eng., April 30, 1840.

J. J. Wallace, General Freight Agent I.C.R., Moncton, N.B., born in Albert Co., N.B., April 20, 1847.

G. C. Wells, Assistant General Passenger Agent C.P.R. Eastern Lines, Montreal, born at Brockville, Ont., April 15, 1866.

Hon. J. Wood, President and General Manager New Brunswick and Prince Edward Island Ry., Sackville, N.B., born there April 18, 1843.

W. Woollatt, ex-General Superintendent Buffalo Division Pere Marquette Rd., Walkerville, Ont., born at Weedon, Hertfordshire, Eng., April 2, 1855.

J. B. Lambkin, Assistant General Passenger Agent, Intercolonial Ry., Moncton, N.B., born at Quebec city, April 5, 1858.

Recent Provincial Legislation.

The following acts respecting transportation and allied interests were assented to by the Lieutenant-Governor of Quebec in the Legislature, Feb. 28 and Mar. 15:

Bellechasse Telephone Co.—Amending act of incorporation.

Engineers' Club of Montreal.—Respecting the constitution of the club.

Gaspesian Ry.—Extending time for construction.

Little Nation Ry.—Act of incorporation.

Longueuil.—Consolidating and revising the charter of the Town of Longueuil, and confirming a grant of a right of way for a tramway.

Lotbiniere and Megantic Ry.—Amending the charter of incorporation.

Montreal.—Amending city charter, including powers re construction of conduits for telephone, telegraph and other electric wires.

Montreal Street Ry.—Amending the act of incorporation and subsequent acts.

Phillipsburg Ry. and Quarry Co.—Amending the act of incorporation.

Quebec and Eastern Ry.—Act of incorporation.

Quebec and Isle of Orleans Ry.—Act of incorporation.

Quebec and Saguenay Ry.—Amending the act of incorporation.

Temiscamingue, Chibougamou and James Bay Ry.—Act of incorporation.

Magdalen River Ry.—Act of incorporation.

MANITOBA ACTS.

At its recent session the Manitoba Legislature passed an act amending the act providing for the establishment of Government telephone and telegraph systems; an act authorizing the guarantee of certain Canadian Northern Ry. bonds, and an act amending the Manitoba Railway Act.

The Alberta Legislature has passed an act providing for the taxation of corporations doing business within the province. The act provides for the following: Street railways, $200, and $10 per mile for distance over 20 miles. Telegraph companies, $1 a mile for every mile of line. Telephone companies, 50c. an instrument in cities of 10,000, and 75c. an instrument in cities under 10,000. Express companies, $500.

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STEAM RAILWAY STATISTICS FOR YEAR ENDED JUNE 30, 1906.

In this table the minus mark (—) before figures in the net earnings column shows that there was a deficit in the operations of the line to the extent of the figures given. The numbers in brackets—thus (1)—after the name of a railway refers to notes on page 227.

Name of Railway	Mileage	Gross Earnings	Net Earnings	Proportion of earnings to working expenses	Earnings per train mile	Operating per train mile	Train Mileage	Engine Mileage	Passengers Carried	Freight Carried
				p. c	$ c	$ c	Miles.	Miles.		Tons
Albert Southern Ry. (1)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Alberta Ry. and Coal Co. (2)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Alberta Ry. and Irrig. Co.(2)	113.72	$ 159,651.88	$ 33,835.15	127	2.44	1.92	65,352	127,641	18,709	105,774
Algoma Cent. & Hud.Bay (3)	95.50	326,195.88	85,850.41	136	7.10	5.23	45,933	327,483	16,666	426,499
Atlantic & Lake Superior (4)	100.00	60,530.12	2,572.59	104	0.87	0.83	69,600	69,600	15,145	25,681
Atlantic, Quebec & West. (5)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Bay of Quinte (6)	93.70	267,471.15	85,332.69	146	1.18	0.81	224,552	224,552	101,661	311,164
Bedlington and Nelson (7)	15.30	4,366.21	—3,527.12	54	1.50	2.71	2,908	2,950	1,399	7,625
Beersville Ry. & Coal Co.	8.63	1,650.60	—2,858.54	36	0.26	0.72	6,200	6,380	1,156	5,257
British Yukon	90.32	323,923.50	170,570.76	211	4.89	2.32	66,146	73,625	10,881	32,118
Brockville, Westport & N.W.	45.00	59,318.99	29,570.14	199	1.02	0.51	58,360	58,360	69,110	21 312
Bruce Mines and Algoma (8)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Buctouche and Moncton	32.00	22,365.09	37.41	100	1.08	1.08	20,554	21,327	15,667	24,225
Canada Atlantic (9)	453.90	1,971,028.03	433,651.43	128	1.27	0.99	1,555,400	1,888,619	463,155	1,549,208
Canada Coals and Ry. Co	12.00	43,080.46	12,428.72	140	1.91	1.36	22,450	29,768	11,328	102,248
Canada Southern (10)	382.19	7,500,477.12	588,906.99	109	2.10	1.93	3,572,889	4,958,412	964,555	5,477,747
CanadianGovernmentRys.(11)										
Intercolonial	1,451.66	7,643,829.90	61,915.54	101	1.02	1.02	7,424,831	9,304,511	2,737,160	3,156,189
Prince Edward Island	261.30	257,270.57	—36,982.59	87	0.82	0.94	313,501	431,678	256,092	87,162
Canadian Northern (12)	2,482.20	5,903,755.61	2,229,022.76	160	1.96	1.22	3,005,130	3,570,934	564,341	1,727,002
Canadian Pacific (13)	8,506.30	60,756,882.40	22,909,591.76	160	2.10	1.31	28,920,969	38,533,448	7,719,161	13,904,454
Cape Breton Ry	31.00	7,640.86	—7,052.10	53	0.39	0.75	19,556	19,556	7,358	2,970
Caraquet (14)	68.00	44,987.98	—3,662.90	92	0.97	1.05	46,039	46,039	10,629	22,655
Carillon and Grenville (15)	13.00	1,981.51	—2,245.20	47	0.58	1.24	3,400	3,900	5,254	102
Central Ontario (16)	134.60	242,692.93	102,182.17	172	1.49	0.86	162,000	181,404	128,330	211,413
Crow's Nest Southern	53.20	142,172.22	51,695.53	156	2.20	1.40	64,628	72,039	12,893	194,613
Cumberland Ry & Coal Co.	32.00	130,958.61	42,434.47	148	0.18	0.12	732,260	843,860	34,931	485,799
Chateauguay & Northern (17)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Dominion Atlantic (18)	279.50	1,132,947.92	249,400.42	129	1.79	0.57	632,758	632,758	450,130	313,790
Edmonton, Yuk. & Paci. (19)	4.50	.....	.....	.....	.....	....	.....	.....	.....	.....
Elgin and Havelock	28.00	10,979.63	954.16	109	0.62	2.00	17,570	17,570	8,811	11,737
Esquimalt & Nanaimo	78.00	386,592.93	114,744.14	142	2.84	....	135,989	173,668	145,975	157,390
Grand Trunk (20)	3,111.13	28,450,422.93	8,658,634.78	143	1.46	1.02	19,425,910	24,793,866	9,624,980	14,260,939
Gt. Northern Ry. Canada (21)	251.10	483,074.34	56,162.51	113	1.54	1.37	312,679	475,176	212,176	351,520
Gulf Shore (14)	16.78	.....	.....	.....	.....	....	.....	.....	.....	.....
Halifax & Southwestern (22)	245.30	238,614.00	36,894.36	118	1.64	1.40	143,323	195,947	145,403	121,747
Hampton & St. Martins.	30.00	10,076.88	1,252.91	115	0.63	0.55	15,900	15,900	6,723	11,374
Hereford (23)	53.30	69,716.35	—19,310.34	78	0.95	1.21	73,398	109,846	25,039	168,978
Inverness Ry. & Coal Co.	61.00	124,130.41	42,079.40	150	1.37	0.90	90,201	122,149	27,851	173,492
Irondale, Bancroft & Ottawa.	48.00	32,924.05	—1,973.55	94	0.93	0.99	35,050	36,200	13,014	37,359
Kaslo and Slocan	31.08	20,095.87	—14,747.30	57	0.94	1.63	21,347	21,347	5,051	7,889
Kent Nor. & St.L. & Rich.	27.00	22,087.56	8,075.06	157	1.22	0.77	18,000	18,250	8,775	95,504
Kettle River Valley	3.86	1,415.10	—1,047.02	57	0.51	0.88	2,784	2,784	5,031	11,434
Kingston and Pembroke	112.85	205,039.30	42,893.68	126	1.24	0.98	164,413	164,413	52,173	129,940
Lake Erie & Detr. Riv. (24)	228.69	1,343,048.06	351,342.69	135	1.59	1.18	840,037	1,089,671	562,258	884,023
Leonora Mount Sicker.(25)	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Liverpool and Milton	5.50	6,639.42	1,085.12	122	0.89	0.75	22,000	29,520	11,198	62,509
Lotbiniere and Megantic	30.00	33,175.17	11,709.09	154	1.50	0.97	7,400	7,400	20,460	16,535
Magnetawan River (26)	1.91	1,580.00	580.00	.....	.....	0.80	1,252	1,252	.....	11,543
Manitoulin and North Shore	16.00	47,856.20	17,916.36	159	3.27	2.05	14,621	18,299	3,609	200,396
Massawippi Valley (27)	35.46	177,311.37	44,893.92	134	0.98	0.73	179,351	249,115	156,623	435,011
Montreal & Atlantic (28)	163.40	588,992.01	79,832.15	118	1.45	1.25	406,980	549,058	244,092	895,117
Montreal & Province (29)	58.60	86,117.05	17,578.50	125	0.99	0.79	87,095	94,537	117,200	92,633
Montreal & Vermont Jct.(29)	23.60	203,470.48	112,421.56	206	1.48	0.67	136,795	140,175	118,514	112,124
Morrissey, Fernie & Michel	10.85	102,575.68	18,895.78	123	3.34	2.72	30,716	30,716	263,425	554,221
Nelson & Fort Shepherd (30)	55.41	87,471.82	—12,357.83	87	1.44	1.65	60,508	60,508	.....	32,230
New Brunswick C. & Ry. Co	58.00	44,253.36	2,224.73	105	0.63	0.60	69,359	84,989	13,940	38,731
New Brunswick & P.E.I.	36.00	26,746.95	6,987.67	135	0.67	0.50	39,542	55,570	19,221	36,100
New Brunswick Southern	82.50	39,867.92	—1,277.62	97	0.65	0.67	61,398	61,398	14,347	20,423
New Westminster South. (31)	24.10	69,189.41	3,953.70	105	1.39	1.01	49,632	50,663	64,671	53,957
Nosbonsing and Nipissing	5.50	46,414.08	3,867.75	109	3.43	3.14	13,535	14,885	.....	27,075
Nova Scotia S. & C. Co.'s Ry.	12.50	5,188.55	—7,910.70	39	0.51	1.31	10,000	19,000	7,478	8,549
Orford Mountain	48.50	27,256.54	—3,929.82	88	0.69	0.78	39,864	39,864	9,231	40,415
Ottawa & New York (32)	56.90	123,790.24	1,641.50	101	1.09	1.07	113,319	114,079	114,537	78,884
Phillipsburg Ry. & Quarry Co.	7.50	795.28	—532.75	59	0.41	0.68	1,950	1,950	200	1,926
Princeton Br. of Wash. Co. Ry.	5.10	20,311.42	2,937.83	124	1.99	1.60	10,225	11,189	103,390	83,061
Qu'Ap., L.Lake & Saskatche'n	253.96	718,482.64	216,086.81	143	1.97	1.37	363,642	457,099	113,526	277,656
Quebec Central (33)	213.50	850,596.03	294,691.73	153	1.22	0.79	697,725	708,936	259,337	543,709

(*Continued on page 227*)

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Steam Railway Statistics for Year Ended June 30, 1906.—(*Continued from page 225*)

Name of Railway	Mileage	Gross Earnings	Net Earnings	Proportion of earnings to working expenses	Earnings per train mile	Operating per train mile	Train Mileage	Engine Mileage	Passengers Carried	Freight Carried
Quebec & Lake St.John.....	244.00	563,857.99	175,795.55	145	1.53	1.05	367,939	582,363	301,729	345,001
Quebec Ry., L.& P.Co.(34)...	30.00	51,014.27	10,824.21	126	1.71	1.35	29,676	30,228	17,323	61,439
Quebec Southern (35).....	143.75	160 769.63	13,893.84	109	1.15	1.05	139,800	140,856	.....	.....
Red Mountain (31).....	9.59	36,679.88	—1,176.89	97	2.94	3.03	12,478	20,033	13,780	67,873
Rutland and Noyan (36).....	3.39	10,024.61	3,121.19	145	1.42	0.98	7,034	7,034	10,462	259,896
Salisbury & Harvey.....	45.00	30,706.71	961.89	101	1.09	1.05	28,170	33,539	13,324	54,828
Schomberg & Aurora.....	14.40	8,042.63	—4,336.96	65	0.36	0.56	22,070	22,070	.....	28,865
Stanstead, Shef'd & Chambly.	43.00	81,574.25	24,385.08	143	1.13	0.79	72,108	91,301	161,331	1,152,655
St. Clair Tunnel, etc. (37)....	2.25	306,229.50	150,907.84	197	.....	.....	.....	103,476	.....	.....
St. Lawrence & Adiron'k (38)	46.12	278,646.89	123,428.29	179	1.30	0.72	213,949	216,455	295,364	440,765
Sydney and Louisburg.....	53.99	386,310.54	9,844.34	102	1.80	1.76	213,924	544,043	49,491	3,770,961
Temiscouata.....	113.00	157,084.76	25,623.39	119	1.05	0.88	149,297	179,733	56,413	104,943
Temiskaming & N. Ontario ..	113.00	428,940.71	193,778.91	182	2.40	1.31	178,222	178,889	235,446	199,724
Thousand Islands.....	6.33	37,135.32	10,651.00	140	1.40	1.00	26,376	26,376	42,823	29,785
Toronto, Ham. & Buffalo (39)	83.67	741,478.63	281,873.34	161	2.12	1.32	350,456	350,456	358,545	1,076,362
Vancouver, Vic. & East. (31).	45.87	238,519.44	102,474.83	175	3.23	1.84	73,640	99,676	46,893	730,473
Vancouver, West. & Yuk.(31)	14.81	53,648 10	—9,392.80	85	1.68	1.98	31,850	31,850	75,140	36,297
Victoria & Sidney (31).....	16.26	26,795.69	2,961.77	112	1.08	0.96	24,861	24,861	49,980	23,200
Victoria Ter. Ry. & F.Co.(37)	18.40	5,554.99	—4,539.37	55	1.32	2.40	4,200	4,200	49,950	29,043
Wellington Colliery Co.....	10.75	5,456.92	—37,469.93	.....	.....	.....	21,296	21,296	4,664	304,374
York and Carleton.....	5.75	2,915.00	—1,100.43	72	0.40	0.56	7,220	7,220	4,650	13,091
	21,353.40	$125,322,865.03	$38,193,430.54				72,723,482	94,180,782	27,989,782	57,966,713

Notes to Steam Railway Statistics.

(1) The Albert Southern extends from Harvey Branch Jct. to Alma, N.B., 16 miles, and from Harvey Branch Albert to Harvey Bank, N.B., 3 miles. It is not being operated. The mileage is not included in the total given.

(2) The Alberta Ry. and Coal Co. is now the Alberta Ry. and Irrigation Co. It has also a third rail on 20 miles making a 3 ft. as well as a standard gauge. The portion of original line from Dunmore to Lethbridge was changed to standard gauge and sold to the C.P.R., Nov. 29, 1893. The A. R. and I. Co.'s mileage includes the St. Mary's River Ry.

(3) The Algoma Central and Hudson Bay Ry. mileage includes the main line Sault Ste. Marie to Chippewa River, 69 miles; and the following branches: Michipicoten to Helen Mines, 12 miles; Josephine Jct. to Josephine Mines, 10.50 miles; mileage 20 to Maple camp, 1.00 mile; Lake Wilde to Breitung Mine, 2.00 miles; mileage 68 to Chippewa River, 1.00 mile. Total 95 miles.

(4) The Atlantic and Lake Superior Ry. includes the Baie des Chaleur Ry., 100 miles; the Great Eastern Ry., 23.00 miles, and the Ottawa Valley Ry., 7.00 miles. The first named only is being operated.

(5) The Atlantic, Quebec and Western Ry. has 102 miles under construction.

(6) The Bay of Quinte Ry. includes the Kingston, Napanee and Western Ry.

(7) The Bedlington and Nelson Ry. has running powers over the C.P.R. from Creston Jct. to Sirdar Jct., B.C., 8.67 miles. It is operated in the interests of the Great Northern Ry., U.S.

(8) The Bruce Mines and Algoma Ry. was not in operation during the year.

(9) The Canada Atlantic Ry. includes the Ottawa, Arnprior and Parry Sound Ry. and the leased lines: Central Counties Ry., 37 40 miles, and the Pembroke Southern Ry., 20.90 miles.

(10) The Canada Southern Ry. includes the leased lines: Sarnia, Chatham and Erie Ry., 7.00 miles; Leamington and St. Clair Ry., 15.95 miles. It has 150.47 miles of double track. The C.S.R. is controlled by the Michigan Central Rd., one of the New York Central and Hudson River Rd. lines.

(11) Canadian Government Railways.—The Intercolonial Ry. mileage is exclusive of the Windsor branch 32 miles, leased to the Dominion Atlantic Ry., but includes the Drummond County, the Canada Eastern Ry., and the Fredericton and St. Mary's Bridge Ry. It has 4.07 miles of double track, and has powers over the G.T.R. from Point Levis to Hadlow, Que., 1.50 miles; from Chaudiere Curve to Chaudiere, Que., 1.18 miles; from Ste. Rosalie Jct. to Montreal, 37.62 miles, total, 40.30 miles.

(12) The Canadian Northern Ry. mileage includes the Winnipeg Great Northern Ry., 40.00 miles; the Port Arthur, Duluth and Western Ry., 85.00 miles; Manitoba and South-Eastern Ry., 107.90 miles; Lake Manitoba Ry. and Canal Co.'s line, 125.00 miles; Ontario and Rainy River Ry., 164 miles; Manitoba Ry. (formerly Northern Pacific and Manitoba Ry. and Portage and North-Western Ry.) leased from the Manitoba Government, 350.48 miles. It also owns 56 miles of line in Minnesota, connecting the Ontario and Rainy River Ry. with the Manitoba and South-Eastern Ry. The figures given refer to the operation of the lines in Canada only.

(13) The Canadian Pacific Ry. mileage includes the following leased lines: Atlantic and North-West, 201.40 miles; British Columbia Southern, 20.40 miles; Calgary and Edmonton, 396.40 miles; Cap de la Madeline, 2.30 miles; Columbia and Western, 157.10 miles; Columbia and Kootenay, 59.50 miles; Credit Valley, 175.70 miles; Fredericton, 22.10 miles; Great North-West Central, 111.70 miles; Guelph Jct., 15.00 miles; Kootenay and Arrowhead, 33.20 miles; Lindsay, Bobcaygeon and Pontypool, 38.70 miles; Manitoba South-Western Colonization, 215.70 miles; Manitoba and North-Western, 294.61 miles; Montreal and Ottawa, 93.50 miles; Montreal and Lake Maskinonge, 11.00 miles; Nakusp and Slocan, 36.50 miles; New Brunswick, 174.60 miles; New Brunswick and Canada, 117.60 miles; Northern Colonization, 23.50 miles; Ontario and Quebec, 474.40 miles; Ottawa Northern and Western, 158.70; Shuswap and Okanagan, 50.80 miles; St. John Bridge and Ry. Extension, 2.00 miles; St. John and Maine, 91.80 miles; St. Lawrence and Ottawa, 58.30 miles; St. Stephen and Milltown, 4.60 miles; Tillsonburg, Lake Erie and Pacific, 33.40 miles; Tobique Valley, 27.50 miles; Toronto, Grey and Bruce, 189.10 miles; Toronto, Hamilton and Buffalo, 2.70 miles; West Ontario Pacific, 26.60 miles; Vancouver and Lulu Island, 16.90 miles. It has 44.20 miles of double track. It has running powers over the G.T.R. from Toronto to Hamilton Jct., 35.80 miles; and over the Canada Atlantic Ry. from Montreal and Ottawa Jct. to Ottawa, 0.90 miles, total 36.70 miles. The Ottawa and North-Western Ry. has running power over 2.50 miles of the Hull Electric Ry.

(14) The Caraquet Ry. also operates the Gulf Shore Ry., 16.78 miles.

(15) The Carillon and Grenville Ry. is operated during the summer only in connection with the steamers of the Ottawa Navigation Co.

(16) The Central Ontario Ry. mileage includes the leased line of the Marmora Ry. and Mining Co., 9.60 miles.

(17) The Chateauguay and Northern Ry. is included in the Great Northern Ry. of Canada.

(18) The Dominion Atlantic Ry. mileage includes the Windsor and Annapolis, 87.50 miles; Cornwallis Valley, 14 miles; Yarmouth and Annapolis (Western Counties), 88 miles; Windsor branch leased from the Intercolonial Ry., 32 miles; and the Midland Ry. of Nova Scotia, 58.00 miles. It has also running powers over the Intercolonial Ry. from Windsor Jct. to Halifax, N.S., 14 miles.

(19) The Edmonton, Yukon and Pacific Ry. is operated by the Canadian Northern Ry. It has running rights over the Calgary and Edmonton Ry. from Strathcona Jct. to Strathcona, Alta., one mile.

(20) The Grand Trunk Ry. mileage includes: G.T.R., 883.35 miles; Great Western, 561.80 miles; Brantford, Norfolk and Port

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Burwell, 34.39 miles; Buffalo and Lake Huron, 160.30 miles; Grand Trunk, Georgian Bay and Lake Erie, 175.62 miles; Owen Sound branch, 12.40 miles; London, Huron and Bruce, 68.00 miles; Waterloo Jct., 10.25 miles; South Norfolk, 17.00 miles; Wellington, Grey and Bruce, 168.18, miles; Northern, 163.07 miles; North Simcoe, 33.00 miles; Hamilton and North-Western, 172.23 miles; Northern Pacific Jct., 115.43 miles; Midland, 166.06 miles; Grand Junction, 85.54 miles; Toronto and Nipissing, 85.00 miles; Lake Simcoe Jct., 26 miles; Victoria, 53.00 miles; Whitby, Port Perry and Lindsay, 46.00 miles; Cobourg, Blairton and Marmora, 15.00 miles; Jacques Cartier Union, 6.50 miles; Montreal and Champlain Jct., 61.73 miles; Beauharnois Jct., 6.28 miles. The G.T.R. has 664.22 miles of double track. It has running powers over the Chaudiere branch of the Intercolonial Ry., 5.77 miles; and it also operates the Magnetawan Ry.

(21) The Great Northern Ry. of Canada (now the Canadian Northern Quebec Ry.) includes the Lower Laurentian Ry. and the Montford and Gatineau Colonization Ry. It also operates the Chateauguay and Northern Ry.

(22) The Halifax and South-Western Ry. mileage includes the Halifax and Yarmouth Ry., the Nova Scotia Central Ry., the Nova Scotia Southern, and the Middleton and Victoria Beach Ry.

(23) The Hereford Ry. mileage includes the Dominion Line Co.'s line. It is operated by the Maine Central Rd.

(24) The Lake Erie and Detroit River Ry. mileage includes the Erie and Huron Ry., and the leased line, the London and Port Stanley Ry., 24.00 miles. The L. E. and D. R. Ry. is owned by the Pere Marquette Rd.

(25) Lenora Mount Sicker Ry.—Not in operation.

(26) The Magnetawan River Ry. is operated by the G.T.R.

(27) The Massawippi Valley Ry. has running powers over the G.T.R. from Lennoxville to Sherbrooke, Que., 2.95 miles. It is leased to the Boston and Maine Rd.

(28) The Montreal and Atlantic Ry. mileage includes the Lake Champlain and St. Lawrence Jct., 60.50 miles. It has 6.65 miles of double track. It is operated by the C.P.R.

(29) The Montreal and Province Line (formerly the Montreal Province and Boston Ry.), the Montreal and Vermont Jct. Ry., and the Stanstead, Shefford and Chambly Ry. are leased to the Central Vermont Ry., which is controlled by the G.T.R.

(30) The Nelson and Fort Sheppard Ry. has running powers over the C.P.R. from Five Mile Point to Nelson, B.C., 4.76 miles. It is operated in the interests of the Great Northern Ry., U.S.

(31) The New Westminster Southern Ry., Red Mountain Ry., the Vancouver, Victoria and Eastern Ry., the Victoria Terminal Ry. and Ferry Co., the Vancouver, Westminster and Yukon Ry., and the Victoria and Sidney Ry., is operated by or in the interests of the Great Northern Ry., U.S.

(32) The Ottawa and New York Ry. has running powers in the city of Ottawa 1.90 miles. It is owned by the New York Central and Hudson River Ry.

(33) The Quebec Central Ry. has running powers over the Intercolonial Ry. from Harlaka Jct. to Levis, 5.00 miles.

(34) The Quebec Ry., Light and Power Co. was formerly the Quebec, Montmorency and Charlevoix Ry. The returns here given are for the operation of the line by steam. The figures as to the operation of the electric cars are given under the electric railway statistics.

(35) The Quebec Southern includes the United Counties, the East Richelieu Valley and the South Shore railways.

(36) The Rutland and Noyan Ry. is operated by the Rutland Rd., which is owned by the New York Central and Hudson River Rd.

(37) The earnings of the St. Clair Tunnel are from tolls on vehicles hauled through the tunnel.

(38) The St. Lawrence and Adirondack Ry. has running powers from Adirondack Jct. to Montreal, 8.70 miles. It is operated by the New York Central and Hudson River Rd.

(39) The Toronto, Hamilton and Buffalo Ry. has 4.69 miles of double track. It is owned by the New York Central and Hudson River Rd., and the C.P.R.

Orders by the Railway Commissioners.

The following orders have been issued by the Board of Railway Commissioners :—

2384. Feb. 26.—Authorizing Farmers' Mutual Telephone Co., Ltd., to carry wires across G.T.R. tracks near Stevensville, Ont.

2470. Dec. 19, 1906.—Directing G.T.R. to compensate E. S. Brennan, of Hamilton, Ont., for damages sustained to his lands.

2471. Nov. 22, 1906.—Authorizing City of Toronto to extend Lansdowne Ave. from south of C.P.R. tracks to north of G.T.R. tracks by a subway.

2472, 2473, 2474, 2475, 2476, 2477, 2479, 2480, 2481, 2482, 2483, 2484, 2485, Jan. 8 and 9.—Authorizing the Canada Southern Ry. to cross with its second track certain highways in Dereham, East Tilbury, Townsend, South Dorchester, Walpole, Howard, Crowland, Humberstone, Bertie, Windham, Raleigh, Harwich and South Norwich, Ont.

2478. Feb. 16.—Authorizing Toronto & Niagara Power Co.'s location from Cainesville to Brantford, Ont.

2486. Jan. 23.—Authorizing Canada Southern Ry. to open for the carriage of traffic its second track between Tillsonburg and Springfield, Ont.

2487. Dec. 7, 1906.—Authorizing G.T.R. to construct a siding to the Peterboro Fuel and Cartage Co.'s premises, Peterboro, Ont.

2488. Jan. 9.—Approving interlocking plant of M.C.Rd. established at crossing with G.T.R. at Hagersville, Ont.

2489. Jan. 23.—Authorizing James Bay Ry. to construct a bridge over log canal, Rama township, Ont.

2490. Dec. 13, 1906.—Directing G.T.R. to put in proper working order the gates at crossing on St. Clair Ave. between Keele St. and Weston Road, West Toronto Jct., Ont.

2491. Jan. 9.—Authorizing C.P.R. to construct bridge at Biscotasing Lake, Ont.

2492 to 2495. Jan. 24.—Bell Telephone crossings over various lines.

2496. Jan. 22.—Granting Windsor and Tecumseh Electric Ry. a further extension of 90 days from Oct 25, 1906, within which to transmit power with its wires over the G.T.R. at Walkerville, Ont.

2497 to 2505.—Authorizing Ottawa and New York Ry. to cross certain highways in Gloucester, Finch, Osnabruck, Russell, Cambridge and Cornwall townships, Ont.; Ann St. between Ottawa and Ottawa East, and a highway on the Indian reservation, Cornwall Island, Ont.

2506. Jan. 28.—Authorizing Canada Southern Ry. to open for carriage of traffic its second track between Tillsonburg and Waterford, Ont., 22 miles.

2507. Jan. 23.—Cancelling order 2362, of Dec. 26, 1906, approving location of G.T. Pacific Ry. between Portage la Prairie and High Bluff, Man.

2508. Oct. 13, 1904.—Approving crossing of London St. Ry. over London and Pt. Stanley Ry. at rail level, South St., London, Ont.

2509. Jan. 25.—Authorizing Bell Telephone crossing over K. and P. Ry. at Renfrew, Ont.

2510. Jan. 30.—Approving revised location Essex Terminal Ry. from Gravel Road to M.C.R.R. right of way, Sandwich West township, Ont.

2511. Feb. 2.—Granting Toronto and Niagara Power Co. extension of 90 days from Jan. 1, to cross T.H. and B. tracks at escarpment, Hamilton, and Vinemount, Ont., with its power wires.

2512. Jan. 18.—Authorizing G.T.R. to construct siding to A. Macpherson & Co.'s premises, Kilworthy, Ont.

2513. Feb. 1.—Authorizing C.P.R. to construct siding to Eastern Townships Brick Manufacturing Co.'s premises, Ascot township, Que.

2514. Jan. 30.—Approving location of Canadian Northern Ontario Ry. mileage 188 to 198, west from Ottawa, Ont.

2515. Jan 28.—Authorizing G.T.R. to construct branch line across Danforth Road, Lansdowne Ave. and Isabella St., East Toronto, Ont.

2516. Jan. 30.—Authorizing C.P.R. as lessee of Walkerton and Lucknow Ry. to cross certain highways in Brant township, Ont.

2517. Jan. 30.—Authorizing Montreal Terminal Ry. to construct a siding to Lakefield Portland Cement Co.'s premises, Pointe aux Trembles, Que.

2518. Feb. 4.—Authorizing and appointing H. A. K. Drury, Assistant Engineer of the Board, to inquire into and report whether the Canadian Northern Ry. has failed to supply necessary cars and equipment for receiving and transporting traffic and the cause therefor, also to learn whether the C.N.R. has all reasonable equipment necessary for keeping its railway in operation in the winter, and if not in what respects it is deficient.

2519 to 2521. Feb. 4.—Bell Telephone Co. crossings over various railways.

2522. Feb. 4.—North American Telegraph Co. crossing over B. of Q. Ry. at Jamieson St., Tweed, Ont.

2523. Jan. 28.—Granting Canadian Northern Ontario Ry. a temporary crossing in Hawkesbury, Ont., over G.T.R. tracks.

2524. Feb. 2.—Granting Toronto and Niagara Power Co. 90 days' extension from Jan. 1, for crossing G.T.R. tracks at four points with its power wires.

2525. Feb. 4.—Granting Toronto and Niagara Power Co. 90 days' extension from Jan. 1, for crossing C.P.R. tracks at Lambton Park and north of Toronto Jct. with its power wires.

2526. Feb. 5.—Authorizing G.T.R. to construct siding to A. McGibbon & Son's premises, Penetanguishene, Ont.

2527 to 2543. Jan. 23.—Authorizing Bell Telephone crossings over various railways.

2544. Feb. 8.—Appointing G. F. Shepley, K.C.; W. S. Buell, counsel assisting Board, and J. Richardson, accountant, to inspect offices, premises, business, books, etc., of Bell Telephone Co. in connection with obtaining for the Board information necessary to enable it to determine how far tariff of tolls shall be approved.

2545. Feb. 4.—Approving C.P.R. rate on party of mining students McGill University from Montreal to Vancouver, B.C.

2546. Feb. 4.—Approving C.P.R. standard freight tariff for Vancouver and Lulu Island Ry. local freight traffic.

2547. Feb. 7.—Authorizing C.P.R. to construct branch line to Parizeau Bros.' premises. Macaza, Que.

2548 to 2551. Feb. 6.—Bell Telephone Co. crossings over various railways.

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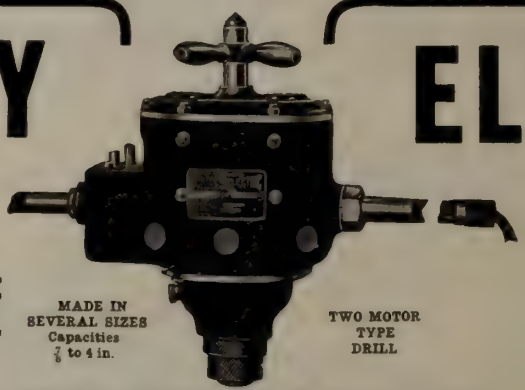

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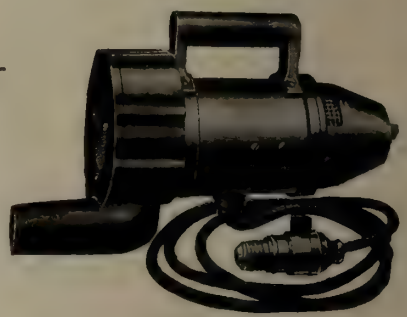

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2552. Feb. 9.—Authorizing Canada Southern Ry. to open for traffic its second track between Tillsonburg and Waterford, Ont.

2553. Feb. 8.—Authorizing Canadian Northern Quebec Ry. to use for construction purposes only a temporary crossing over C.P.R. at Lachevrotiere, Que.

2554. Feb. 4.—Granting North American Telegraph Co. a further extension of one month from Jan. 13, for filing of tariffs of tolls.

2555. Feb. 8.—Appointing G. F. Shepley, K.C.; W. S. Buell, and J. Richardson to act as regards the North American Telegraph Co. in the same manner as authorized to act in regard to the Bell Telephone Co. in order 2544.

2556. Feb. 25—Authorizing Welland County Telephone Co. to carry its wires over G.T.R. branches at Ridgeway, Ont.

2557. Feb. 12.—Authorizing the C.P.R. to construct and operate branch line from near Greene Ave., Westmount and Montreal.

2558. Feb. 14.—Authorizing Welland County Telephone Co. to place wires across lands and under M.C.R. tracks at the shipyards, Bertie tp., Ont.

2559 Jan. 30.—Authorizing Welland County Telephone Co. to place wires under M.C.R. tracks at second crossing north of Niagara Jct., Ont.

2560. Feb. 16.—Amending order of Feb. 4, granting extension of one month to North American Telegraph Co., for filing its tariffs of telephone tolls, by striking out the following words after the word "tolls" in operative part of order: "And permitting the applicant company....time authorized."

2561. Feb. 8.—Appointing G. F. Shepley, W. S. Buell, and J. Richardson to inspect offices, premises, etc., of the Express Traffic Association (Express Companies in Canada). All information obtained by them to be privileged and for use of Board only.

2562. Feb. 8.—Approving supplement 7 to local standard passenger tariff C.R.C. no. W 38, applying a rate of 4c. a mile on spur from Curzon Jct. to Kingsgate, B.C.

2563. Feb. 14.—Approving location of Montreal Park and Island Ry. from near Henderson station to the south bank of Riviere des Prairies, Que.

2564. Feb. 14.—Authorizing Canadian Northern Ont. Ry. to construct bridge on Hutton branch over west branch of Vermilion River, Ont.

2565. Feb. 14.—Authorizing C.P.R. to cross with tracks highway between lot 15, con. 15, Carrick tp., and lot 33, con. 3, Brant tp., Bruce, Ont.

2566. Feb. 14.—Authorizing Chatham Gas Co. to lay gas main under G.T.R. tracks at Lacroix St., Chatham, Ont.

2567 and 2568. Feb. 14.—Authorizing Canadian Niagara Power Co. to carry its wires over Pere Marquette Rd., and Michigan Central Rd. tracks, on lot 8, con. 4, Bertie tp., Welland, Ont.

2569. Feb. 8.—Amending the books of reference accompanying location plans of Teulon extension of C.P.R. Stonewall branch, Manitoba, approved by Board Sept. 19, 1906.

2570. Feb. 15.—Authorizing C.P.R. and G.T.R. to refund to exporters of cheese tolls collected from them during 1906.

2571. Feb. 15.—Authorizing Malahide & Bayham Telephone Co-operative Association, to carry a wire under G.T.R. tracks west of Glencolin, at highway crossing between con. 7 and 8, Malahide tp., and highway crossing at Corinth station, Ont.

2572. Feb. 20.—Authorizing Atlantic, Quebec and Western Ry. to open for traffic its line between junction with Atlantic and Lake Superior Ry. to the King's highway, Gaspe county, Que.

2573. Feb. 16.—Authorizing Pearl Mfg. Co. to carry an electric wire over G.T.R. tracks at Bromptonville, Que.

2574. Feb. 16.—Approving Grand Trunk Pacific Ry.'s location from station 1425+60 to station 2561+12, mile 27 west to mile 48.5, British Columbia.

2575. Feb. 16.—Authorizing location of St. Mary's and Western Ontario Ry. from south limit of St. Mary's to Embro, Ont.

2576. Feb. 16.—Granting leave to Brandon, Saskatchewan and Hudson Bay Ry. to take possession of portion of s.e. ¼ sec. 18, tp. 10, range 19, west 1st prin. mer., being a portion of the Canadian Northern Ry.'s right of way.

2577. Feb. 19.—Authorizing a further extension of 90 days from Feb. 16, to the Ontario Power Co. to erect its wires over G.T.R. tracks, as shown on plan filed under reference 17944, file 1889.

2578. Feb. 19.—Authorizing the City of Woodstock, Ont., to lay a gas main under G.T.R. tracks, at Henry St.

2579. Feb. 14.—Approving alterations in G.T.R. grade between Tiffin and Orillia, Ont.

2580. Feb. 19.—Authorizing C.P.R. to construct and operate branch line from the main line between Quebec and St. Martin's Jct., Que., to the Montreal Paper Co.'s property.

2581. Feb. 19.—Authorizing the C.P.R. to cross the highway between Brant and Bruce townships, also road allowance between lots 35 and 36, Brant tp., Ont.

2582. Feb. 19.—Authorizing the North American Telegraph Co. to place 20 telegraph and telephone wires across G.T.R. tracks at first highway road east of bridge, near Howard's station, Ont.

2583. Feb. 19.—Authorizing C.P.R. to construct and operate branch line on the Quebec section from the main line to the Canada Paint Co.'s premises, lot 466, Champlain county, Que.

2584. Feb. 19.—Approving of location of G.T. Pacific Ry. from the boundary line between Portage la Prairie and High Bluff parishes to Manitoba, the east line of section 14, tp. 11, range 4, west of 1st mer., mileage 106.44.

2585. Feb. 19.—Authorizing the Middleton and Victoria Beach Ry. to operate trains over the crossing of Dominion Atlantic Ry. main line, at Middleton, N.S.

2586. Feb. 19.—Authorizing Canadian Northern Ry. to cross its Hartney-Virden branch with its Brandon-Regina branch in the n.e. ¼ of sec. 9, tp. 9, range 26, west 1st prin. mer., Manitoba.

2587. Feb. 19.—Approving revised location of Canadian Northern Ontario Ry., through Russell county, Ont., between mileage 46 and 48.27, west from Hawkesbury.

2588. Feb. 16.—Authorizing the Bell Telephone Co. to place wires across the Brandon, Saskatchewan and Hudson Bay Ry. north of Minto, Man.

2589. Feb. 19.—Approving plans of drainage system submitted by the Canada Southern Ry. Co. in re J. A. Smith's lands, Yarmouth tp., Ont.

2590. Feb. 21.—Authorizing British Columbia Electric Ry. Co. to place wires across a C.P.R. siding in Vancouver, B.C.

2591. Feb. 14.—Amending order 1389, authorizing construction of a transfer track at Prince Albert, Sask., between the Canadian Northern and Qu'Appelle, Long Lake and Saskatchewan railways, by striking out the provisions relating to the installation and maintenance of interlocking and derailing plant at the junction.

2592. Feb. 14.—Approving location of 19 stations on C.P.R. Toronto-Sudbury line.

2593. Feb. 21.—Authorizing Ontario Power Co. of Niagara Falls to place its lines across Niagara, St. Catharines and Toronto Ry. in Thorold tp., Ont.

2594. Feb. 15.—Authorizing Canada Southern Ry. to provide farm crossing for J. Wright, across the railway on lot 29, con. 5, Enniskillen tp., Ont.

2595. Feb. 14.—Authorizing location of Canadian Northern Quebec Ry. through Quebec county, mileage 8 to 13.8 west from Quebec bridge.

2596. Feb. 26.—Granting G.T.R. extension of time to May 15, within which to instal interlocking appliance at crossing with C.P.R. at lot no. 8, 9th con., Yarmouth tp., Ont.

2597. Feb. 26.—Approving Dominion Atlantic Ry. plans for renewal of superstructure of bridge across Sissiboo River, Weymouth, N.S.

2598. Feb. 26.—Authorizing Michigan Central Rd. to operate derails and signals at its own expense at crossing with the Niagara Falls, Wesley Park and Clifton Tramway at Victoria Ave., Niagara Falls, Ont.

2599. Feb. 25.—Authorizing C.P.R. as lessees of Nicola, Kamloops and Simalkameen Ry. to open the line for traffic from Coutlee to Nicola Lake, B.C.

2600. Feb. 14.—Approving location of C.P.R. station at Buckskin, Ont., Toronto-Sudbury branch.

2601 to 2604. Feb. 25.—Bell Telephone Co. crossings over various railways.

2605. Feb. 28.—Authorizing G.T. Pacific Ry. to cross C.P.R., Miniota branch, tracks near Forrest, Man.

2606. Feb. 27.—Authorizing Welland County Telephone Co. to carry its wires under superstructure of International Bridge at Bridgeburg, Ont.

2607. Mar. 1.—Authorizing Canadian Northern Quebec Ry. to construct a bridge over Riviere des Envies, Que., on the Garneau-Quebec division.

2608. May 10, 1906.—Authorizing the C.P.R. to deviate a portion of its line near Bolton station, Ont., by constructing a new line (Bolton grade revision).

2609. Feb. 28.—Correcting order of May 1, 1906, which authorized G.T.R. to construct a branch line in Toronto to point opposite the lands occupied by Murray & Laidlaw, east of Scott St., by striking out the words "macadamized" and "macadamizing" and substituting the words "paved" and "paving," also the words "Don Esplanade for "Esplanade St."

2610. Mar. 1.—Authorizing City of Guelph, Ont., to carry electric light wires over G.T.R. tracks at Woolwich St.

2611. Feb. 28.—Approving interlocking plant installed by Michigan Central Rd. at crossing of G.T.R. tracks at Welland, Ont.

2612. Feb. 28.—Approving revised location of C.P.R. Crow's Nest branch to and through McLeod, Alta.

2613. Mar. 1.—Ordering Guelph & Goderich Ry. (C.P.R.) to erect and maintain retaining wall to support G.T.R. lands in Goderich, Ont., which the G. & G. Ry. were authorized to take by order of July 18, 1905.

2614 and 2615. Mar. 1.—Authorizing C.P.R. to construct bridges over south and north crossings of Naiscootying River, Ont., on its Toronto-Sudbury Branch.

2616. Mar. 1.—Authorizing Canadian Northern Quebec, Ry. to construct a bridge on its Garneau-Quebec Division, over the Charest River, Que.

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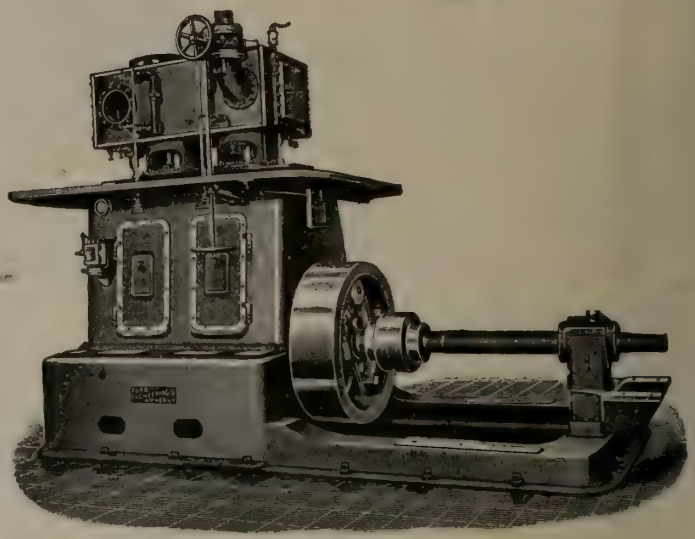

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2617. Mar. 1.—Authorizing the G.T.R. to construct a siding to the Indestructible Brick Co.'s premises near Swansea, Ont.

2618. Mar. 1.—Authorizing C.P.R. to construct a siding to F. T. Cross's premises, near Cascades, Que.

2619. Mar. 1.—Authorizing Canadian Northern Quebec Ry. to construct a viaduct over a ravine at station 102 on its Garneau-Quebec division, Champlain county, Que.

2620. Mar. 1.—Authorizing Canadian Northern Ontario Ry. to construct a bridge on its northern division over Shawanaga River, Parry Sound district, Ont.

2621. Sept. 17.—Approving agreement between the city of Calgary and C.P.R. in respect to construction and maintenance of public highway, level and subway, and crossings of C.P.R. right of way and tracks in Calgary, Alta.

2622. Feb. 26.—Extending time for sanction and approval of Bell Telephone Co.'s tariffs of tolls to May 13.

2623. Mar. 5.—Authorizing C.P.R. to construct a spur to Clare & Brockest's premises, Winnipeg.

2624. Mar. 4.—Approving location of G.T. Pacific Ry. from mile 48.5 to 80.5, British Columbia.

2625. Mar. 5.—Approving location of G.T. Pacific Ry. from mile 80.5 to 115.5, British Columbia.

2626. Mar. 7.—Authorizing C.P.R. to construct spur to G. F. Stephens & Co.'s premises, Winnipeg.

2627. Mar. 7.—Authorizing C.P.R. to construct two spurs on its Sudbury-Kleinburg branch at mileage 54.7, Medonte tp., Ont., one 1,990 ft, the other about 800 ft.

2628. Mar. 9.—Authorizing G.T.R. to construct spur to J. Gow's premises, Fergus, Ont.

2629. Mar. 7.—Authorizing C.P.R. to construct spur to Alberta Portland Cement Co.'s premises.

2630. Mar. 7.—Authorizing C.P.R. to construct spur to Cushing Bros.' premises in Alberta.

2631. Mar. 8.—Authorizing C.P.R. to construct spur from its Revelstoke and Arrow Lake branch to Bowman Lumber Co.'s premises.

2632. Mar. 9.—Authorizing C.P.R. to construct and operate tracks along and across Union St., West St. John, N.B., also along new wharf between Sand Point slip and Rodney slip.

2633. Mar. 7.—Authorizing Midland Ry. of Manitoba to erect telegraph wires over C.P.R. at Morden, Man.

2634. Mar. 7.—Authorizing Niagara District Telephone Co. to carry wires across the G.T.R. tracks at Jordan, Ont., by underground conduits.

2635. Mar. 7.—Authorizing Essex Terminal Ry. to cross the Maisonville road, Tecumseh and gravel road, Sandwich East, Ont.

2636. Mar. 7.—Authorizing Essex Terminal Ry. to cross Benjamin St. and Tecumseh road, Windsor, Ont.

2637. Mar. 6.—Approving Canadian Express Co.'s by-law, authorizing J. Bryce, V.P. and Manager, or such other officers as he may designate, to prepare and issue tariffs of tolls.

2638. Feb. 14.—Approving Bedington and Nelson Ry. Co.'s standard passenger tariff, C.R.C. 179.

2639. Mar. 7.—Authorizing Delhi Light and Power Co. to carry power line and telephone wires across G.T.R. tracks at Main St., Delhi, Ont.

2640. Mar. 11.—Authorizing Town of Port Arthur, Ont., to lay sewer pipes under C.P.R. and Canadian Northern Ry. tracks on John St., and on the line of John St. extended out into Thunder Bay.

2641. Mar. 7.—Approving location of C.P.R. station at Bala, Ont.

2642. Mar. 11.—Amending order 2119, Nov. 28, 1906, which authorized the C.P.R. to cross G.T.R. tracks with a double track on Don Improvement, Toronto, by inserting the words "Toronto Belt Line Ry. Co., leased and operated by the," before the words "Grand Trunk," in original order.

2643. Mar. 9.—Authorizing Markham and Pickering Telephone Co. to erect wires across the C.P.R. tracks at points in Markham tp., Ont.

2644. Mar. 11.—Approving National Express Co. by-law authorizing its General Traffic Manager to prepare and issue tariffs.

2645. Mar. 11.—Approving American Express Co.'s by-law authorizing its General Traffic Manager to prepare and issue tariffs.

2646 to 2662. Mar. 9.—Authorizing Bell Telephone Company to carry its telephone wires across various railway tracks.

2663. Feb. 14.—Authorizing Ottawa Electric Ry. to carry its tracks by an overhead bridge on Bell St., Ottawa, over the Canada Atlantic Ry. tracks, and apportioning the cost of maintenance between the Ottawa Electric Ry. Co., the Canada Atlantic Ry. Co. and the City of Ottawa.

2664. Feb. 28.—Altering order of Oct. 13, 1904, par. 4, by substituting the following: "That the normal position of the derails be open and the semaphores be at safety."

2665. Mar. 12.—Varying order 1999, Nov. 8, 1906, respecting the Town of High River, Alta., to make it read so that it is Fourth St. (instead of Third) which is to be carried over the C.P.R. tracks.

2666. Mar. 12.—Extending time for approval of North American Telegraph Co.'s telephone tolls to May 13, 1907.

2667. Mar. 13.—Approving Michigan Central Rd. interlocking plant, installed at Niagara Jct., Ont.

2668. Mar. 13.—Granting temporary crossing to Windsor, Essex and Lake Shore Rapid Ry., with construction trains, over C.P.R. tracks.

2669, 2670, 2671. Mar. 13.—Authorizing Ingersoll Telephone Co. to carry its wires over the C.P.R. tracks on Hamilton St., Ingersoll, and in West Oxford tp., also over the Tillsonburg, Lake Erie and Pacific Ry. (C.P.R.) tracks at Charles St. W., Ingersoll Ont.

2672. Mar. 13.—Authorizing Canadian Northern Ontario Ry. to construct a bridge on its Hutton branch, over west branch of Vermilion River.

2673. Mar. 7.—Authorizing Harrietsville Telephone Association to carry its wires over Michigan Central Rd. tracks in Elgin Co., Ont.

2674. Mar. 13.—Directing G.T.R. to reduce its rate on logs, carloads, minimum weight 35,000 lbs. per car, between Brule Lake and Renfrew, Ont., for the purpose of manufacture and reshipment of the product thereof to 5c. per 100 lbs.

2675. Mar. 12.—Authorizing the G.T.R. to construct a spur to the Anthes Furniture Co.'s premises, Berlin, Ont.

2676. Mar. 16.—Authorizing Falls Power Co. to carry its electrical circuits and wires over the G.T.R. tracks in Welland, Ont.

The Montreal Terminal Warehouse and Cartage Co.'s officers and directors for the current year are: President, J. W. Pyke; Vice-President, R. W. MacDougall; Managing Director, D. E. Cameron; other directors: C. E. Archibald, H. M. Marier, D. Morrice, jr.; C. A. Smart, F. Bacon.

G.T.R. Station and Hotel for Ottawa.

C. M. Hays, Second Vice-President and General Manager, met the Ottawa City Council Feb. 11 and submitted plans, etc., for the proposed new central station with hotel adjoining. He said the station would cost about $250,000 and the hotel between $1,250,000 and $1,500,000. He asked for the widening of Little Sussex St., on which the new station would face, from 30 ft., which it now is, to 100 ft.; the stopping up of street ends and lanes on which the company's property abuts; and the fixing of an assessment valuation on the station of $150,000 for 20 years, and on the hotel of $200,000 for 20 years. It having been pointed out by an alderman that the assessment of the Russell House was much more than $200,000, Mr. Hays said he was willing for the assessment on the new hotel to be fixed at the same as that of the Russell, which is said to be $380,000, or not more than $400,000. In reply to a question, he said that if the city would not grant the concessions asked, the company would not build the hotel, but merely a station, though the latter would probably not be of the same design as if an hotel was also built. It was arranged that the company's proposal should be submitted in writing.

It is proposed to widen Little Sussex St. to the width of Sussex St. west of Rideau, so as to continue the street cars, which now pass over Sapper's Bridge and Rideau St., down to the central station plaza. The station proper is located on the axis line of Sussex St., as widened, at the head of a new plaza of sufficient area to afford ample accommodations for all passengers to and from the new station, either in carriages, or otherwise. This plaza will contain approximately over 32,000 sq. ft. The baggage and express wagons are provided with separate driveway, so as not to encroach upon this plaza. Passengers to and from the station can distribute across this plaza to the north, east and west. It is proposed also to cross the Rideau canal with a foot bridge, coming out on the canal reserve opposite Queen St., so that pedestrians can come down Elgin St. to and from the Parliament Buildings and grounds through Queen St. and reach the station by means of this foot bridge, thus avoiding the more crowded thoroughfares across Sapper's bridge. This arrangement will also logically distribute the incoming and outgoing tide of travel towards the southerly, easterly and westerly portions of the city. It is proposed, in addition, to provide egress and exit through the hotel to and from Rideau St. and from the restaurant, grill, cafe and lunch rooms located in the hotel, for the various classes of travellers utilizing the station. It has been suggested that the plaza referred to should be named after the premier, and that an "isle of safety" in the centre of the plaza might form a suitable spot for a memorial to Sir Wilfrid Laurier.

The passenger station itself has been planned to meet all possible passenger traffic conditions at Ottawa in a thorough, up-to-date and satisfactory manner, with room for future growth and development and ample provision at present for the Grand Trunk, Canadian Pacific, Canadian Northern and Ottawa and New York railways. The station proposed consists of a large circular central rotunda, or waiting room, 85 ft. in diameter, open to the roof, lighted by clerestory windows, without skylights. This rotunda will be used principally as a waiting room, and not crossed, as ordinarily, by passengers to and from the trains, which invariably renders such a room impracticable and uncomfortable as a waiting room. Around the outside of this rotunda are wide and generous passage ways for passengers who

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may desire to reach the ticket office, baggage rooms, waiting rooms, lavatories, telephone, news stand, train shed, concourse, and exits and entrances, without passing through the rotunda or waiting room proper. Union ticket offices of ample dimensions, with mezzanine story for clerks and storage of tickets, are provided, together with sleeping car and telegraph office connected, all located at the most central and convenient points for passengers. The rotunda or waiting room and connecting corridors occupy approximately over 5,600 sq. ft. Separate waiting rooms for women, with retiring and resting rooms, also lavatories, are arranged for, covering, approximately, over 1,150 sq. ft. Also smoking rooms and lavatories for men, separate, opening off the concourse, covering, approximately, over 700 sq. ft. The two main entrance vestibules or lobbies are located directly opposite the cross walks at Sussex St. on the main façade and can be reached by passengers driving or walking, or from the street cars, or trains, or baggage rooms, without passing through the station or waiting room. The total length of the station will be approximately 250 by 125 ft. wide, exclusive of concourse, which is approximately 50 by 250 ft. in length additional. Various buildings for baggage, express, mail and power, will cover a length of approximately 350 ft. by a width of 35 ft. Ample provision is also made for union baggage room, customs, etc., for outgoing and incoming baggage, easily accessible for passengers driving to the trains, or baggage delivered by transfer, and covering approximately over 7,450 sq. ft. In addition, express and mail rooms are provided, separately, covering approximately over 3,460 sq. ft., also power and heating plant for the station, with separate track for coal and ashes, and driveway for teams reaching track provided for theatrical scenery, etc. All of this area is so arranged as to be increased in size as may be required. The second story of the station building, with separate entrances, stairway and elevator, is arranged for the accommodation of the various railway officials and clerks, who will occupy the Central Station, including the despatchers, etc., covering approximately over 14,000 sq. ft. for office room, to be sub-divided as desired, including separate lavatories, etc., and corridors opening into clere-story of the rotunda. The roofs overhead are so planned as to carry the snow and water away from the sidewalks and approaches. The construction of the station building will be fireproof throughout, with framework of steel and iron, including large elliptical trusses supporting the rotunda roof. The exterior walls will be of solid masonry, showing a front of granite and stone in light colors, with projecting cornices, pediments, columns, pilasters and massive openings. The entrance doorways will have glass marquise over head, while the baggage room doors will be protected by umbrella awnings. Adjoining the station, the carriage concourse will be connected by wide projecting canopies for the comfort and convenience of passengers. The entire design for the station building is classical throughout in keeping with its purpose. The lines, while simple, are so designed as to make this very simplicity an element of strength, dignity and effectiveness in the whole treatment of the façades, facing the plaza and the axis line. The dome over the rotunda covered with copper will form a striking feature from any of the approaches, and as seen from a distance, while the arrangements of the plan itself, with the wings set at right angles with the adjoining streets, and on the axis line of the train shed and plaza add to the utility and strength of the whole design.

Connected with and forming part of the station proper will be the passenger train shed of unique construction, 530 by 156 ft., covering approximately over 8,200 sq. ft., covering seven tracks and four platforms. The columns are so located for the overhead trusses as to allow the platforms to be free and clear from all encumbrances. The design and general construction consists of a series of arched trusses, about 17 ft. at the lowest point above the tracks, the entire construction being of steel and cement, fireproof throughout. Directly over the tracks, openings will be left for the escape of smoke and gas from the locomotives, and for the first time designed particularly for weather conditions prevailing in Canada, a series of automatic controlled trapdoors are arranged along the roof of the train shed, from which snow can be dropped on cars standing underneath, whenever desired. The passenger platforms will be lighted overhead with wire glass skylights, at the apex of the roof, where they cannot be covered by snow, and where condensation can be provided for. These platforms will be of cement, 20 ft. wide in the clear, and raised nearly to the height of the car steps, which should prove a great convenience to women and children. The main platforms for express trains are over 700 ft. long, with umbrella awnings extending over the same beyond the train shed proper. The platforms for local trains are 600 ft. long The space between the platforms will be drained toward the centre, so that any oil from the cars or engines, together with any rain or snow coming through the smoke openings, will be carried away from the platforms and to drains outside of the building. The general arrangement of the tracks entering and leaving the train shed is such that any platform can be reached from the present two main passenger tracks underneath Laurier bridge.

The entire area set aside for the station terminal proposed, covers approximately 266,000 sq. ft., or over six acres. In addition to the large train shed concourse for outgoing passengers, approximately 50 by 250 ft. long, arrangements are made whereby passengers from the trains can pass out to the passenger concourse and station exits, entirely independent of this outgoing concourse, and in case of large excursions or special traffic, this feature will be appreciated. All passenger trains to and from the station will back into the same, thus the smoke nuisance will be entirely eliminated and the convenience and comfort of passengers proportionately increased. Instead of the present type of through station, always undesirable where it can be avoided, the new station and train shed have been designed as what is known technically as a head on station, that is, the trains start and stop without passing through the station, all of the switching and transferring of cars and changing of locomotives being accomplished in the station yards, outside of the building proper, thus avoiding confusion, danger to passengers, and the usual and unpleasant smoke nuisance. All of the present railways entering Ottawa can reach this new terminal by running around a Y and backing into the station ready to start out to their destination, in the case of through trains at even less distance than they could pass through the city otherwise.

As the building of the hotel is dependent on the action of the Ottawa City Council, and may not be gone on with, we defer giving a description of the plans till the matter is settled.

The Canadian Transit Co. has been granted supplemental letters patent under the Ontario Companies' Act, authorizing the increase of its capital stock from $50,000 to $100,000.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,000	325,100	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	138,800−
Jan..	351,400	410,300	58,900	8,500−
	$4,267,500	$3,008,800	$1,258,700	$ 169,500+

Approximate earnings for Feb., $333,200, against $301,400 for Feb., 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug.	6,170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122.94	98,188.05−
Dec.	5,992,098.07	3,726,503.73	2,265,594.34	80,988.97−
Jan.	4,205,527.07	3,657,199.46	548,327.61	718,906.41−
	$41,670,001.14	$26,535,806.83	$15,134,194.31	$1,679,561.19+

Approximate earnings for Feb., $4,219,000, against 4,183,000 for Feb., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Jan., $234,099.47; net earnings, $46,619.35, against $224,126.78 gross and $66,183.91 net for Jan., 1906. Net earnings for seven months ended Jan. 31, $621,222.83 against $639,452.79 for same period, 1905-06. Approximate earnings for Feb., $214,240, against $229,619 for Feb., 1906.

MINERAL RANGE RY.—Approximate earnings for Feb., $53,805, against $55,093 for Feb., 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Jan., $706,290.06; net earnings, $138,175.18, against $860,705.40 gross and $400,417.57 net for Jan., 1906. Net earnings for seven months ended Jan. 31, $3,513,078.31, against $3,852,116.61, for same period 1905-06. Approximate earnings for Feb., $627,554, against $739,240 for Feb., 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for Jan. as compared with Jan., 1906.

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$2,517,000	$2,240,861
Expenses	1,942,000	1,710,368
Net earnings	$ 575,000	$ 530,493

CANADA ATLANTIC RAILWAY.

Earnings	$ 125,300	$ 118,223
Expenses	143,800	114,031
Net earnings	$ 18,500	$ 4,192

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 450,200	$ 409,200
Expenses	412,000	375,500
Net earnings	$ 38,200	$ 33,700

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 148,100	$ 122,453
Expenses	126,700	93,495
Net earnings	$ 21,400	$ 28,958

Approximate earnings for Feb., $2,741,838, against $2,602,274 for Feb., 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to Feb. 28.

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£943,467	£861,876	£81,591	....
Canada Atlantic	51,281	48,516	2,765	....
G. T. Western	178,693	168,255	10,438	....
D. G. H. & M.	55,879	51,227	4,652	....
Total	£1,229,320	£1,129,874	£99,446	....

Montreal Warehousing Co.—Following are the officers and directors for the current year: President, C. M. Hays; Vice-President, W. M. Ramsay; other directors: E. H. Fitzhugh, J. W. Loud, W. Wainwright; Manager and Secretary, G. H. Hanna. The company is a subsidiary of the G.T.R., and the annual report is not printed or distributed. The annual meeting was held Mar. 6, in the G.T.R. offices, Montreal.

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Showing the unprecedented approval of the Base Supported Rail Joint by Railway Managers After Ten Years' Service

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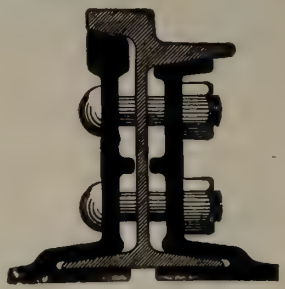

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Made from Rolled Steel to fit over 125 Sections of Rails

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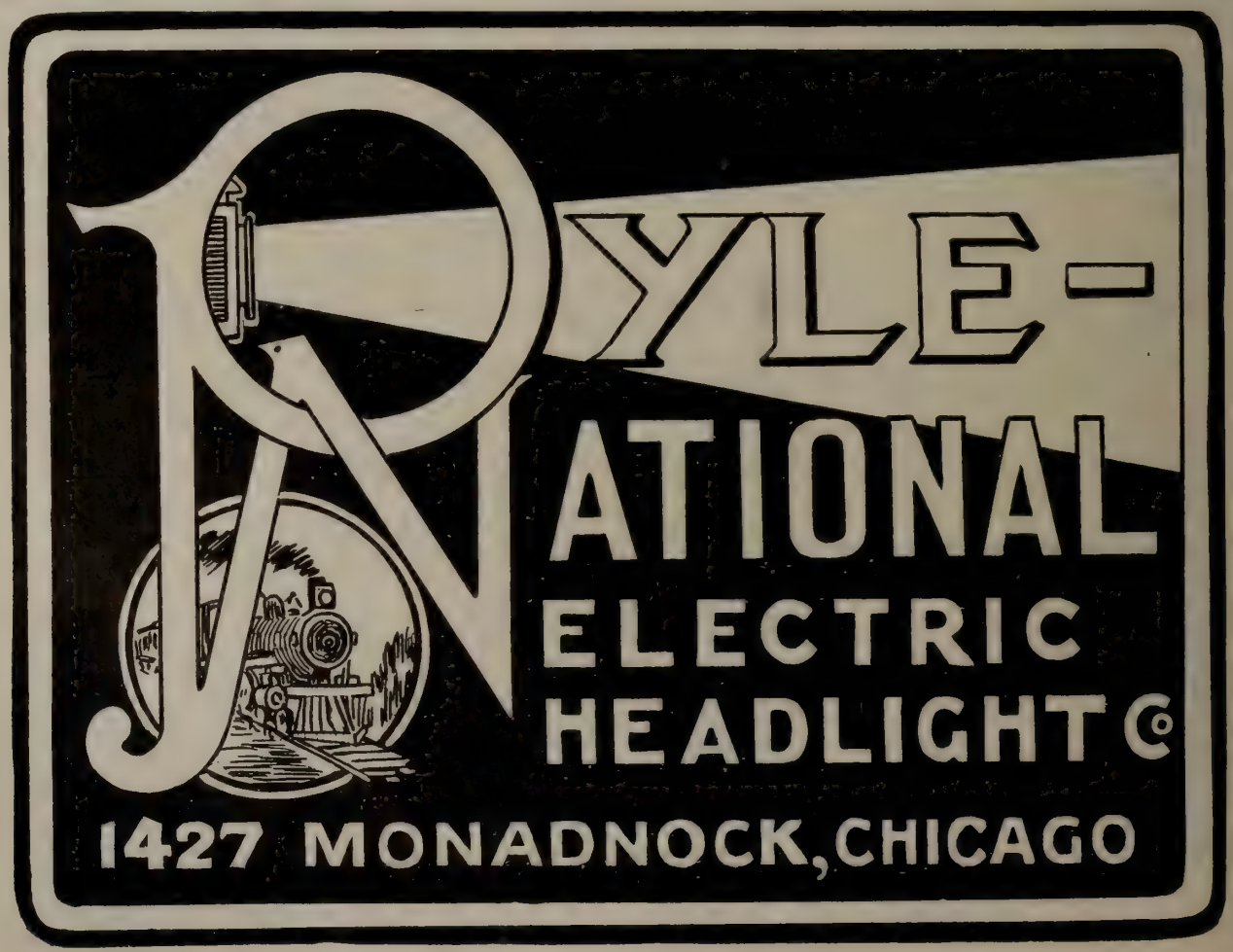
EXCLUSIVE MAKERS OF

CONTINUOUS, WEBER AND WOLHAUPTER RAIL JOINTS

STEP OR COMPROMISE; GIRDER, AND INSULATING RAIL JOINTS — PROTECTED BY PATENTS IN CANADA

The extent of their use is evidence of their excellence. — WE MANUFACTURE IN CANADA.



Quebec and Lake St. John Ry.

This line, the control of which has been secured by Mackenzie, Mann & Co., was opened from Quebec to Gosford, 25.5 miles, in 1871, that section being laid with wooden rails. In 1880 it was reconstructed and extended to St. Raymond, 36 miles from Quebec. From 1884 to 1888 a further extension was built to Roberval, and in 1898 the eastern extension was completed to Chicoutimi. A branch is under construction from Jeannotte to La Tuque, about 40 miles, on which 16.75 miles of rails were laid in 1906. A branch of a mile to Roberval wharf and the Gosford branch of 1.50 miles were also built in 1906. The bonded debt on Dec. 31, 1905, was as follows: £350,000 prior lien 4% 20 year £100 coupon bonds due April 21, 1921; £442,000 1st mortgage 5% £50 and £100 bonds due Dec. 31, 1924, ranking after prior lien bonds; £640,000 6% £50 and £100 income bonds due Dec. 31, 1924, interest payable if earned. The interest on the 1st mortgage bonds, payable Jan. 1 and July 1, was at the rate of 4% a year till July, 1905.

The statistics of operation for the year ended June 30, 1906, show: Passenger earnings, $174,420.15; freight earnings, $340,711.41; mail and express, $19,097.78; other sources, $29,628.65; total, $563,857.99. Expenditure—Maintenance of way and buildings, $84,454.21; motive power, $153,167.37; cars, $17,801.91; general and operating expenses, $132,638.95; total, $388,062.44; net earnings, $175,795.55. Train mileage—passenger trains, 201,820 miles; freight trains, 129,495 miles; mixed trains, 36,624 miles; total, 367,939 miles; engine mileage, 582,363 miles. Passengers carried, 301,729; freight handled, 345,001 tons.

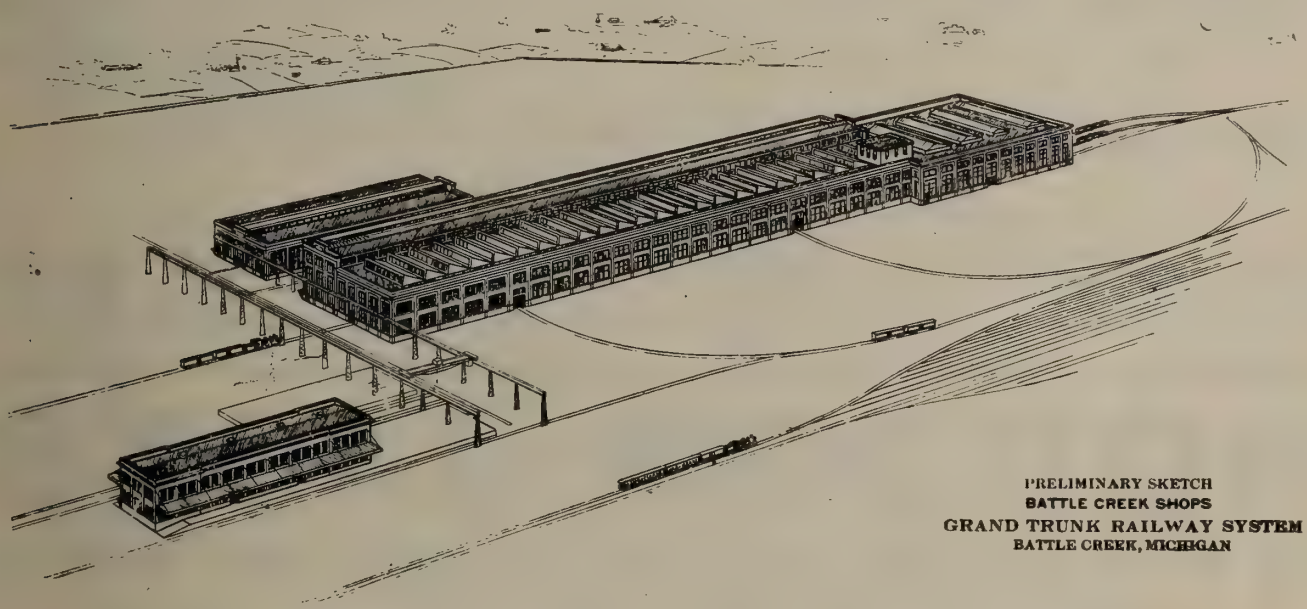
The company owns 23 locomotives, 5 sleeping cars, 1 official car, 9 first-class cars, 9 second-class and immigrant cars, 4 combination passenger and baggage cars, 3 baggage, mail and express cars, 361 cattle and box freight cars, 2 refrigerator cars, 237 platform cars, 69 coal cars, 8 conductors' vans, 2 tool cars, 4 snow plows, 1 flanger, 2 steam shovels, 15 dump cars.

Earnings for Jan. $35,844, against $29,330 for Jan., 1906.

The C.P.R. has issued tariff W. 902, supersideng W. 351, for the Vancouver and Lulu Island Ry., which is operated by the British Columbia Electric Ry., as agents for the C.P.R. The new tariff became effective Mar. 18.

G.T.R. Shops at Battle Creek, Mich.

The G.T.R. is building at Battle Creek general locomotive shops for the lines west of the St. Clair and Detroit rivers, which include about 1,000 miles of line and 300 locomotives, and as the present small shops are unable to handle the large power, improved facilities are imperative. The new shops are about two miles from the business district of the city, and half a mile from the present street railway terminus. They are placed on a tract of 188 acres adjacent to the present freight yard and main line tracks. The plans given herewith show only the locomotive department, but the requirements and relation of a future car department have been carefully considered, and the complete general shop layout is characterized by the following features: A midway crane of 70 ft. span, at right angles to the base line tracks, travelling through the centre of the group of buildings of both departments, will handle all the cross-yard traffic and be supplemented by a network of industrial tracks and turn-tables of standard gauge. A system of through tracks parallel to the main line will serve all departments and be connected to the main line at both ends of the shop yard. Provision has been made for 100% increase in all departments without in any way interfering with future yard traffic and without materially increasing the future travel between departments. The buildings are separated from each other by a minimum distance of 50 ft. for fire protection. There is ample yard space tributary to each building, yet the layout is not spread over an unreasonable area. An economical use has been made of the property, and a liberal provision left for the Maintenance of Way, and Bridge and Building Departments at the eastern end of the yard. The power house is centrally located, all large power consuming buildings being within 1,000 ft. It will be adjacent to the future planing mill, which, in addition to being a large power consumer, will produce a vast amount of shavings and refuse, which can easily be disposed of as fuel at a profit in the power house. A feature of the transportation facilities is the provision made for a system of mono-rail electric cranes, which will supplement the ordinary travelling crane service. In this system any or all of the regular cranes become transfer cranes, connecting with I-beam runways extending throughout the shops and yards. These runways will be installed as the plant develops, and as rapidly as the needs require.



PRELIMINARY SKETCH
BATTLE CREEK SHOPS
GRAND TRUNK RAILWAY SYSTEM
BATTLE CREEK, MICHIGAN

THE LOCOMOTIVE SHOP includes both the locomotive machine and erecting shop, as well as the boiler and tank shop, and the machine department of the latter. In order to prevent the length of the building from becoming excessive when the future extension is added, a departure from the usual proceeding has been made in placing the boiler and tank shop at right angles to the main part of the building. The building is a self-supporting steel frame structure, with brick walls and a concrete roof. The overall length is about 833 ft., and the maximum width about 185 ft. The boiler and tank shop is separated from the machine and erecting shop by a brick curtain wall, which will in a great measure prevent noises from the former shop reaching the main building. An opening is provided in this wall large enough to pass a boiler. The erecting bay is 70 ft. wide and contains 25 pits on 24 ft. centers. Locomotives will enter and leave the building from the west side and, until future extension is made, the use of turn-tables has been avoided. Each pit will be provided with compressed air, water, steam and electrical connections, while the entire shop will be served with a 120 ton crane and an auxiliary crane immediately beneath, of 10 tons capacity. Paralleling this shop is the locomotive department of the machine shop, in two aisles, one with crane service for the large machines and one without crane service containing small belt-driven tools. Above the latter is a gallery for heating fans, lavatories, locker-rooms, the tin shop and the air-brake department. Alternate columns in these two aisles will be provided with compressed air and water service connections, while on every few columns the water service connections will be extended to the roof.

THE BOILER SHOP is in the first aisle of the part of the building at right angles to the main shop. Stalls are located on 20 ft. centers, with 60 ft. of clear width between columns. Opening from this shop is the riveting tower, situated so as not to interfere with any other department, and, at the same time, conveniently located for direct service from the boiler shop crane. A 30 ton crane serves the boiler shop and a 20 ton crane the riveting tower. The boiler and tank machine shop extends throughout the next aisle and is served with a 10 ton crane, while beyond is the tank shop, of sufficient width to allow room for a tank and its frame on a single stall. A balcony for heating apparatus, lockers and toilet rooms will extend over a portion of this shop; a 20 ton and a 5 ton crane supplying

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Tee Rails 12, 18, and 28 lb. per yard

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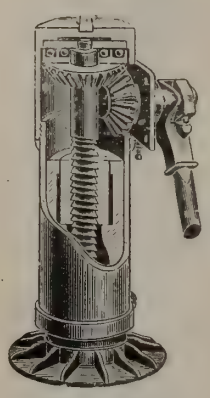
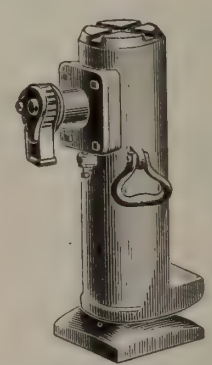
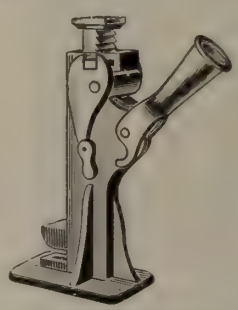
ARE MADE IN CANADA AND SAVE YOU DELAY AND DUTY ON AMERICAN MADE JACKS.


Sectional View


Foot Lift Jack

50 Styles 8 to 70 Tons Capacity
Carried in stock for IMMEDIATE DELIVERY


15 Ton Track Jack

Traversing Jack

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Stock Carried by MUSSENS LIMITED, MONTREAL

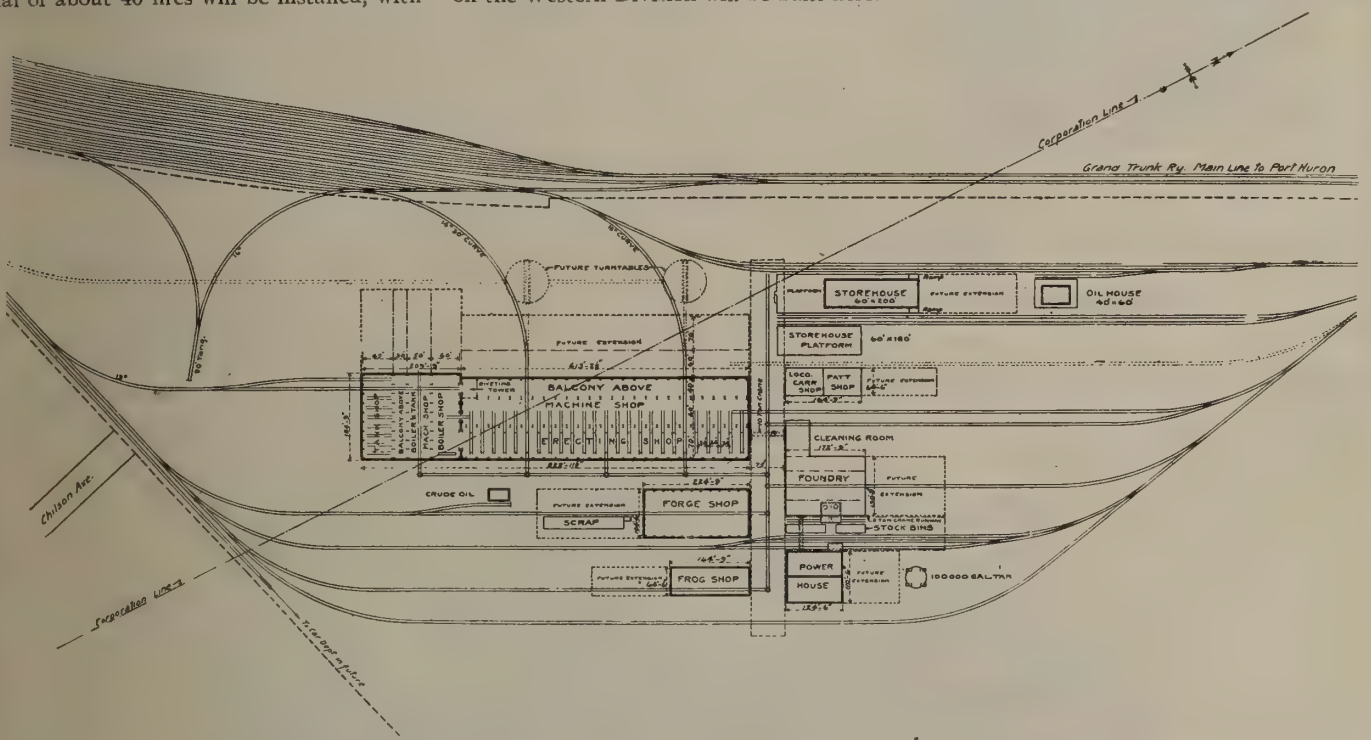
all the transportation facilities necessary. The entire building will be heated by indirect radiation, steam or hot water being used in the heaters. Fans and heaters will be located on the balconies, the hot air being distributed through a system of underground ducts with openings in the walls and locomotive pits, and through an auxiliary distributing system of galvanized iron ducts extending along the west wall of the building under the balcony. All tools throughout the building will be driven by individual motors when of sufficient size, while smaller tools will be grouped and driven by a single motor or connected with line shafting under the balcony. All wiring will be concealed, a main wiring tunnel extending throughout the building with cross ducts in each bay. Particularly good natural lighting is obtained from the large windows and from the skylights, and saw-toothed roofs.

THE BLACKSMITH SHOP is a self-supporting steel frame structure with brick walls, 105 by 225 ft. A jib crane will serve the large fires, furnaces, and the heavy tools. A total of about 40 fires will be installed, with slag can be transferred to the ash car near the power house. A system of narrow gauge tracks and turn-tables in and about the foundry will supplement the cranes. The brass foundry, 30 by 72 ft., will be located in one side of the foundry building. It will be equipped with one or more furnaces of the converter type and with other modern appliances. The cleaning room of the foundry is contained in a wing 48 by 81 ft., and this portion of the building will be served by a 5 ton crane, which will run into the main part, thus facilitating the transportation of castings to the cleaning room. The building will be a self-supporting steel structure with brick walls, a cement roof, and exceptionally good lighting. The floor will consist of a fill of molding sand on the natural soil. The equipment will be designed for an output of 20 tons a day.

THE FROG SHOP will also be of brick and steel design, of construction similar to that of the other buildings. It will be 65 by 165 ft. and will be supplied with crane service. All the frogs, switches and crossings required on the Western Division will be built here.

on the tracks at grade level. The upper floor will be surrounded by a concrete platform with inclines to grade. A fire wall will separate a room for waste from the oil service room. Oil will be handled by the most approved methods. Every precaution will be taken to have this building fireproof and its isolated position with regard to the remaining buildings gives additional protection from fire hazards.

THE POWER PLANT is designed with a view of supplying all the power necessary for operating the plant and for heating during winter, and to supply sufficient steam for all steam-driven tools, also for operating an auxiliary generating plant of 200 k.w. capacity, which will be used in emergency in the event of it being decided to purchase power, which question is now under consideration. Should the power be purchased, the necessary transforming apparatus will be installed in the power house, current being received at 5,000 volts and distributed for shop use at 440 and 110 volts alternating current and 220 volts direct current. Alternating current motors operated on the 440 volt circuit will be installed



GRAND TRUNK RAILWAY SHOPS, BATTLE CREEK, MICH.

a full equipment of steam hammers, punches and shears, bolt headers, upsetting machines, etc. The floor will be of cinders laid on tamped clay. Individual motor drive will be used on all tools that require it, while smaller tools will be grouped and driven by motors from line shafting. This building is designed to give good ventilation; a monitor equipped with swinging windows, extending the entire length of the roof. A small amount of heat will be supplied by direct radiation. This will only be used to keep the building warm over night, as the forge fires will give the required amount of heat during working hours.

THE IRON FOUNDRY has been located convenient both to the storehouse and the locomotive shop, the principal consumers of its output. A 20 ton crane reduces the manual handling of ores, ladles, castings and flasks to a minimum, while an outside crane of 5 tons capacity, running between it and the power house, will serve the charging floor. This crane will be of more utility than an elevator, as coke can be unloaded directly from cars either into bunkers or on to the charging platform; pig iron can be easily delivered to the platform and truck loads of

THE PATTERN AND LOCOMOTIVE CARPENTER SHOP will be similar to the others in design and of such construction that the pattern storage rooms will be absolutely fireproof. It will be approximately 65 by 165 ft.

THE STOREHOUSE.—In contrast with the average locomotive repair shop storehouse of semi-fireproof construction, in this case the storehouse will be absolutely fireproof throughout, of concrete construction, with brick walls, occupying 60 by 200 ft. All stores will be kept on the ground floor and the upper story reserved for the storekeeper and master mechanic's offices. The building will be liberally supplied with platform space and track facilities on each side, which will permit easy access for loading and unloading supplies while not impeding traffic between the shops and the store. The platform in front of the building extends under the yard crane, allowing materials to be easily transported.

THE OIL HOUSE will also be of reinforced concrete construction, of similar design to the storehouse, and will have one story and a basement, the latter containing the large tanks used for oil storage. These will be arranged for filling by gravity from tank cars

wherever possible, being used to drive line shafting and individual crane and machine tool motors that do not require excessive variations in speeds. Variable speed motors and a few crane motors will be run on the 220 volt direct current system, and all lights on the 110 volt line. Also if power is obtained from outside sources the capacity of the boiler plant will be governed by the amount of heat required in the various buildings in winter, and in order to heat the buildings during the coldest weather it will be necessary to install approximately 1,800 boiler horse-power. Steam will be taken from these boilers and used in connection with the blower system and distributing ducts in all the larger buildings, and then in the smaller buildings the heating will be obtained through direct radiation.

PIPING SYSTEMS.—Piping from the power house to the shops will, as far as possible, be carried on the supports of the midway crane. This obviates the necessity for a tunnel, in this case, hard to drain. Air compressors will be located in each building, furnishing the necessary air for that building, different buildings being connected through a small pipe line, which will prevent absolute

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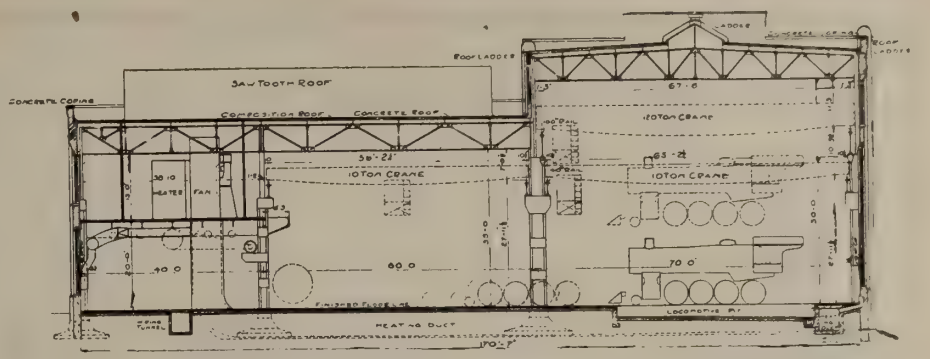
WALTER J. BUZBY **ATLANTIC CITY, N.J.**

Occupies one-half square of unobstructed beach front.
New fireproof addition of 100 rooms and baths with sea and fresh water.
Most favorably located and best appointed hotel in the North for winter business.

shut-down in case the compressors in any particular building fail. Water for shop and boiler purposes will be taken from Battle Creek River, a pumping station with electrically driven pumps being located at the bank of the creek. This pump will force water into a 150,000 gallon tank located in the vicinity of the power house, the latter giving sufficient pressure to supply the various buildings. This tank will be divided into two portions, one of 50,000 and the other of 100,000 gallons capacity, the latter being kept in reserve in case of fire. The river pumps will be supplemented by fire pumps in the power house, which can be used on the line in case of necessity. As a supplementary water supply, connection will be made with Battle Creek city water service, it being the intention to use this supply for drinking water and for all purposes only in case the supply from Battle Creek River should fail for any reason. The water service lines will loop all the buildings, and from 40 to 50 hydrants will be placed in different parts of the yard, so that there will be no distance greater than 300 ft. between any two hydrants. Inside the buildings, hose connections will be placed every 200 ft., with a swinging hose reel and 75 ft. of hose. It is the intention at the present to discharge all sewage into Battle Creek River, with the understanding that should this sewage become objectionable at any time, it will either be treated or the system changed to discharge all the sanitary sewage into the city's sewer system.

E. H. Fitzhugh, Third Vice-President G.T.R., is in active charge of the arrangements for the entire installation, and W. D. Robb, Superintendent of Motive Power, is planning the operating features of the shops The shops will be operated under the supervision of J. F. McGrath, Master Mechanic, now in charge of Fort Gratiot shops, who is assisting Mr. Robb in selecting and arranging the tool equipment.



CROSS SECTION MACHINE AND ERECTING SHOP, G.T.R. SHOPS, BATTLE CREEK, MICH.

Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.—Railway earnings from July 1 to Feb. 28, $120,419; net earnings from all sources, exclusive of land sales for same period, $37,907.

Canada Atlantic Ry.—An action has been instituted in the Ontario courts by H. L. Sprague, of New York, against J. R. Booth, Ottawa, to recover $2,000,000 damages for alleged breach of contract on the sale of the Canada Atlantic Ry., and for the return of $259,000, a deposit on the contract. The action is entered by Sprague as assignee of W. Seward Webb and A. L. Meyer. In 1902-03 an ambitious scheme of railway amalgamation in Canada, with the Rutland Rd., of which W. S. Webb was President, as the U.S. connection, was one of the features of railway financing. An option was obtained on the Canada Atlantic Ry., but the project never materialized, and there has been a good deal of litigation as a result of the different operations of the parties to the contract.

Dominion Atlantic Ry.—Earnings for Jan. $68,800, against $63,400 for Jan., 1906. Earnings for Feb. $59,200, against $54,067 for Feb., 1906. Total for two months ended Feb. 28, $128,000, against $117,400 for same period 1906.

Grand Trunk Pacific Ry.—A recent London, Eng., cable states that only 70 per cent. of the last issue of 4% debenture stock was taken up.

Inverness Ry. and Coal Co.—The report for the year ended 1906 shows a decrease of 10,582 tons of coal shipped, but the net loss in money is not given. The railway for the year shows net earnings of $42,079.40.

New Brunswick Ry. and Coal Co.—The report of the Commissioners for the year 1906 as presented to the New Brunswick Legislature Mar. 3 showed: total earnings, $43,196, against $37,031 in 1905 and $25,387 in 1904. The net earnings were $2,345, against a deficit of about $6,000 in 1905, and $14,000 in 1904. The statistics showed: Freight carried, 38,731 tons, 31,336 tons being coal, against 25,917 tons, 18,318 tons being coal, in 1905; passengers carried, 13,940, against 10,836 in 1905. Additional rolling stock is required, the 46 cars which the line possesses being unable to carry the freight offering. The company had been offered contracts to supply 73,000 tons of coal during the current year.

Pere Marquette Rd.—The suits instituted by W. A. Bradford respecting the Chicago, Cincinnati and Louisville Rd., have been compromised, and the way partially cleared for the ending of the receivership of the Cincinnati, Dayton and Ohio Rd., and the P. M. Rd.

Quebec Central Ry.—The London Stock Exchange has granted an official quotation for a further issue of 1,000 shares of £25 fully paid.

Temiscouata Ry.—The net earnings for the year 1906 amounted to $40,165.

Toronto, Hamilton and Buffalo Ry.—Earnings for Feb. $55,358.02, against $54,025.13 for Feb., 1906.

White Pass and Yukon Ry.—Gross earnings for 1906, $1,629,952. Earnings for Jan., $13,800.

Misuse of the 24-Hour System.

H. W. D. Armstrong, M. Can. Soc. C.E., wrote from Saskatoon, Sask., Feb. 15: "Allow me to draw attention to what appears to me a misuse of the 24-hour system of time, as given in many railway time bills. It is not unusual to find something like the following:

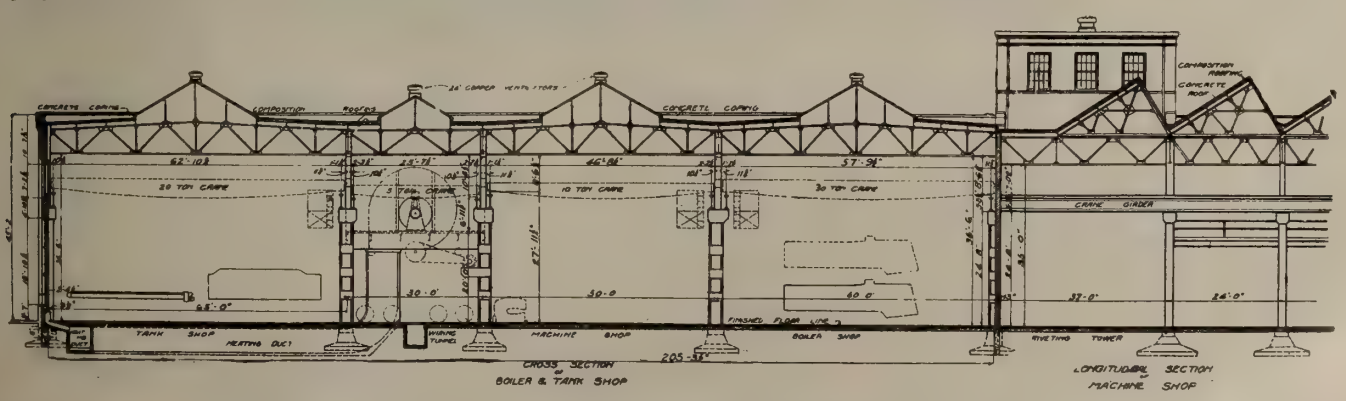
"'This time bill will take effect at 24.01 on Saturday, February 16.' When does that minute arrive? This being written at 15 o'clock on Friday, the 15th nine hours from now will be 24 o'clock on Friday, the 15th, and the day and date is ended.

"Now the notice of change in time bill given above is probably intended to take effect at one minute after midnight to-night. Certainly the one minute belongs to date 16th, but not the hour 24; because 24 o'clock on Saturday, the 16, does not arrive until to-morrow night, and we have the hour belonging to one date and minute belonging to another used together.

"It seems to me that when 24 o'clock arrives, the date and day terminate. Any time desired to be noted up to 1 o'clock following should be expressed as 0.01, 0.05, etc., and the notice first mentioned should read: 'This time bill will take effect at 0.01 on Saturday, Feb. 16.'

"I have spoken to different railway managers and superintendents on the subject, but so far have failed to find any to admit the error which I have endeavored to explain.

The Nova Scotia Government is taking power at the current session of the Legislature by an amendment of the Railway Act, to, reduce, alter, vary or change the tariffs of rates submitted to it for approval by the railway companies subject to provincial control.



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Wm. Malthaner

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The case of William Malthaner, of Green Island, Troy, N.Y., shows the results we accomplish. Mr Malthaner was an apprentice when he started on the I.C.S. road to success. We enabled him to become division master mechanic of the Delaware and Hudson R.R., and to increase his earnings from 80 cents per day to more than $2,500 per year. Joseph Gasselin, 80 Fleurie St., Quebec, was enabled to advance from a locomotive firemen and become a locomotive engineer, and to increase his earnings from $50 and $75 per month to $100 and $125 per month. J. O. Montreuil, 22 Maple Ave., Quebec, through the I.C.S., rose from an assistant engineer to resident engineer for the Trans-Continental Railway, and increased his earnings from $43 to $160 per month. J. R. Trepanier, 136 Queen St., Quebec, formerly a wiper, is now instructor in train rules, and is earning $75 per month more than when he enrolled in the I. C. S.

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R. R. Traveling Fireman	Arch. Draftsman	Elec.-Railway Supt.
Locomotive Engineer	Structural Engineer	Plumb. & Heat. Contr.
Air Brake Instructor	Structural Draftsman	Illustrator
Air Brake Inspector	Contractor and Builder	Bookkeeper
Air Brake Repairman	Mining Engineer	Stenographer
R. R. Const. Engineer	Bridge Engineer	Ad Writer
Mechanical Engineer	Metallurgist	French
Mechanical Draftsman	Assayer	German
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D. S. WHITE
PRESIDENT

Traymore Hotel Company
CHAS. O. MARQUETTE - MANAGER

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

R. S. Rider has been appointed Secretary-Treasurer Canadian Steel and Wire Co., Hamilton, Ont., succeeding the late A. B. Manship.

H. A. Norton, who recently returned from a trip around the world in the interest of Norton jacks, has again sailed for Europe to be away three months.

The Dominion Bridge Co. is seeking for permission from the Toronto City Council to instal forges for breaking rivets and blacksmith work on Sorauren Ave.

The St. Thomas Brass Co., Ltd., has passed a by-law authorizing it to hold its meetings without the Province of Ontario, which has been confirmed by supplementary letters patent under the Ontario Companies' Act.

The Bowser Business Boomer is issued twice a month by S. F. Bowser and Co., 66 Fraser Avenue, Toronto, oil tank manufacturers, in the interest of their selling force. The Feb. 20 issue contains a primer for salesmen, which has lots of good points in it.

All Hart-convertible cars, the patents for the construction of which in Canada are owned by the Dominion Dump Car Co., Montreal, to be built during 1907, will be of the improved type, the hopper door opening being 26 in. Other improvements will also be made in the cars.

The Montreal Steel Works, Ltd., directorate for the current year is as follows: President, K. W. Blackwell; Vice-President, J. R. Wilson; Second Vice-President and Secretary-Treasurer, C. H. Godfrey; Assistant to the President, W. F. Angus; other director, C. Scott, Jr., Philadelphia, Pa.

The Rail Joint Co. of Canada, Ltd., has been organized and taken over the patents and business of the Continuous Rail Joint Co. of Canada Ltd. Headquarters, 216 Board of Trade Building, Montreal. It has commenced the manufacture of its products in Canada, and is prepared to make prompt deliveries.

The American Locomotive Co. has issued a pamphlet illustrating and describing light locomotives, both steam and compressed air, adapted for the use of contractors, mines, logging roads, plantations and industrial plants, and for a wide range of service on light rails and poor roadbed. It contains illustrations of different designs and types and tables of the principal dimensions of designs of progressive weights and hauling capacities of the types illustrated. Engineering data and a number of useful tables and formulæ are also given.

Wireless Telegraphy.—A. E. Kennelly, Professor of Electrical Engineering, Harvard University, Cambridge, Mass., has issued an elementary treatise on wireless telegraphy. In popular language he presents the known facts concerning the nature and operation of wireless telegraphy in general without special reference to the inventors of any particular system. The relation between wire and wireless telegraphy is the line of development adopted, and this comparison of conditions throws considerable light on both systems. The publishers are Moffatt, Yard & Co., New York.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Bangor and Aroostook Rd.—Plans have been filed with the Maine State authorities, showing the location of an extension from West Seebois to the junction of the Allagash and St. John Rivers, near the Canadian boundary. This point is near the terminus of the line for which the Northern Rd. is seeking authority to construct at the current session of the Maine Legislature. See Northern Rd.

Bellingham Bay and British Columbia Rd.—J. Howard, President Western Fuel Co., Nanaimo, B.C., has been elected Vice-President of the B.B. and B.C. Rd., The company proposes to expend $2,000,000 upon development work in order to increase the coal trade between Nanaimo and points in the U.S., reached over its railway.

Bracebridge and Trading Lake Ry.—Following are the officers for the current year President, W. W. Kinsey; Vice-President, P. Hutchison; Managing Director, W. H. Brown; Secretary-Treasurer, R. P. Perry; Solicitor, T. Johnson. F. C. Norris was present at the annual meeting which was held at Bracebridge, Ont., Mar. 11. It was again stated that work will be commenced upon construction on an early date, and that the line will be built this year.

Eastern Townships Ry.—P. Tourigny, Victoriaville, Que.; N. Rosseau, P. Desilets, Ste. Clothilde de Horton, Que.; E. Vigneau, St. Samuel de Horton, Que.; L. R. Levergne, Arthabaska, are the provisional directors named in the act incorporating a company with this title, which is being considered by the Dominion Parliament at its current session. Authority is being asked to construct a railway from St. Leonard, crossing the Nicolet River to the junction of the Quebec Central Ry. and the Maine Central Rd., in Wolfe county, and to enter into agreements for any purpose with the G.T.R., the Quebec Contral Ry., or the Maine Central Rd.

Edmonton, Dunvegan and British Columbia Ry.—J. B. MacDonald, Winnipeg; J. A. Sandgreen, Edmonton, Alta.; C. Pringle, Ottawa; D. McLeod, T. G. Gallagher, Spokane, Wash., are the provisional directors of a company for which an act of incorporation is being asked at the current session of the Dominion Parliament. Power is being asked to construct a railway from Edmonton, Alta., to Dunvegan, thence along the Peace River Valley to the Parsnip River, B.C., and along that river to Fort George, B.C.

Great Northern Ry. (U.S.) in Canada.—Jas. Fisher, K.C., stated at Winnipeg, Mar. 2, that there had been no change in the company's plans regarding that city. The line from the boundary into the city will for a considerable distance parallel the C.P.R. Press reports from Winnipeg state that survey parties are now in the field for a railway from Winnipeg to Dawson, Yukon, and a line also to Hudson Bay. One report states that the surveys are being made for the G.N. Ry., and another states that they are being made in the interests of the Northern Pacific Ry. Another report states that the Hudson Bay line is to be run on to Chicago, the main object being the carriage of fish. (Mar., pg. 159.)

Halifax and Northeastern Ry.—The Lieut.-Governor, in his speech at the opening of the Nova Scotia Legislature, expressed regret that the company had been found unwilling to enter into a contract on the terms of the present legislation. The survey parties have been disbanded and it is understood that the company has abandoned the project. The question of the construction of the line as a Government work is being discussed in the Legislature.

Huntsville and Lake of Bays Ry.—A clause has been inserted in the Ontario Railway Act, making the provisions of the same apply to the H. and L. of B. Ry.

Intercolonial Ry.—The Halifax, N.S., Board of Trade is petitioning the Government to extend the I.C.R. along the water front there to the foot of Morris St.

A contract has been let to Rhodes, Curry & Co., Amherst, N.S., for the erection of some buildings in connection with the new roundhouse at Halifax, at a cost of about $80,000. (Mar., pg. 161.)

International Ry. of New Brunswick.—A bill is under consideration at the current session of the N.B. Legislature authorizing the Government to guarantee the company's bonds to the extent of $8,000 a mile for the entire line. The line is projected from Campbellton across the province to St. Leonards, 110 miles, where connection would be made with U.S. railway lines. Under the provisions of a previous act, the Legislature authorized the guarantee of bonds at the rate of $5,000 a mile upon the first 50 miles of line. At present there has been constructed 33 miles and it is expected to have the 50 miles completed this summer. The cost of construction has been heavier than was anticipated, hence the application for the increased subsidy guarantee. The estimated cost of the line, as certified by the Chief Engineer of the Government Railways, is $27,339 a mile. T. Malcolm, the contractor, stated to the Legislature that arrangements were in progress which would enable work to be started at an early date at both ends of the line.

Kettle Valley Lines.—It is reported from Spokane, Wash., that the company has secured practically the whole of the right-of-way required for the extension of its line from Republic to Spokane. W. T. Beck, the President, is reported to have received instructions to start construction work as soon as weather conditions will permit. (Mar., pg. 161.)

Newfoundland-Canada Tunnel.—In connection with the proposal to operate a 20-knot steamship service between Newfoundland and the west coast of Ireland, it is proposed to construct a tunnel under the Strait of Belle Isle, and to establish railway connection between a proposed line through Labrador and the Newfoundland Ry. The promoters are given eight years in which to carry out the tunnel part of the project, but the steamship line is to take shape within two years.

Nipissing Central Ry.—J. W. Fitzpatrick, Ottawa; G. F. Duncan, Portland, Me.; B. F. Pearson, Halifax, N.S.; A. G. Browning, North Bay, Ont.; H. L. Dunn, Toronto; G. Taylor, New Liskeard; J. J. Whipple, Brocton, Mass., are the provisional directors named in the bill before the Dominion Parliament at its current session, incorporating a company with this title. It is desired to have authority to construct railways from Latchford on the Temiskaming and Northern Ontario Ry., through the Cobalt district, northerly to Wendigo Lake and the G.T. Pacific Ry.; from Latchford via the Montreal River to the G.T. Pacific Ry, with a branch from New Liskeard to Wendigo Lake; and other branches.

Northern Rd.—The Maine Legislature has been asked to pass an act incorporating a company with this title to construct a railway from the present terminus of the Bangor and Aroostook Rd. near Fort Kent, to the junction of the St. John and the St. Francis Rivers, and also from Fort Kent to Frenchville, Madawaska, Grand Isle and Van Buren. These projected lines will run along the St. John Valley between Van Buren and the junction with the St. Francis River, and will connect the two lines of the B. and A. Ry., now terminating at Van Buren and Fort Kent,

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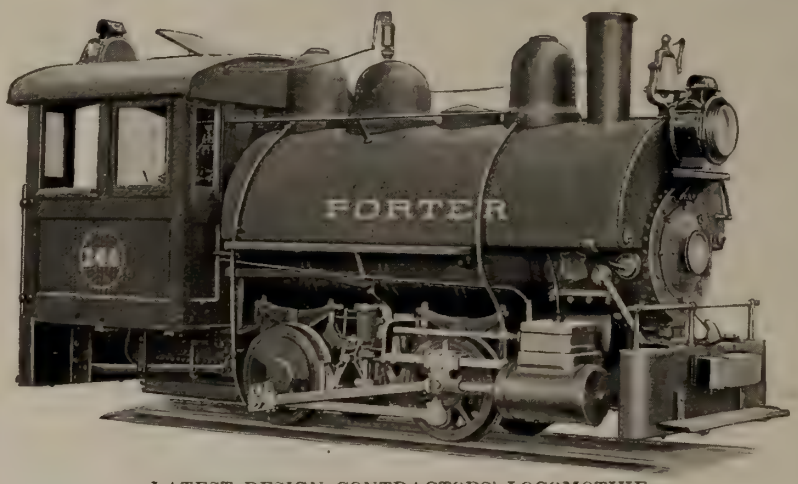

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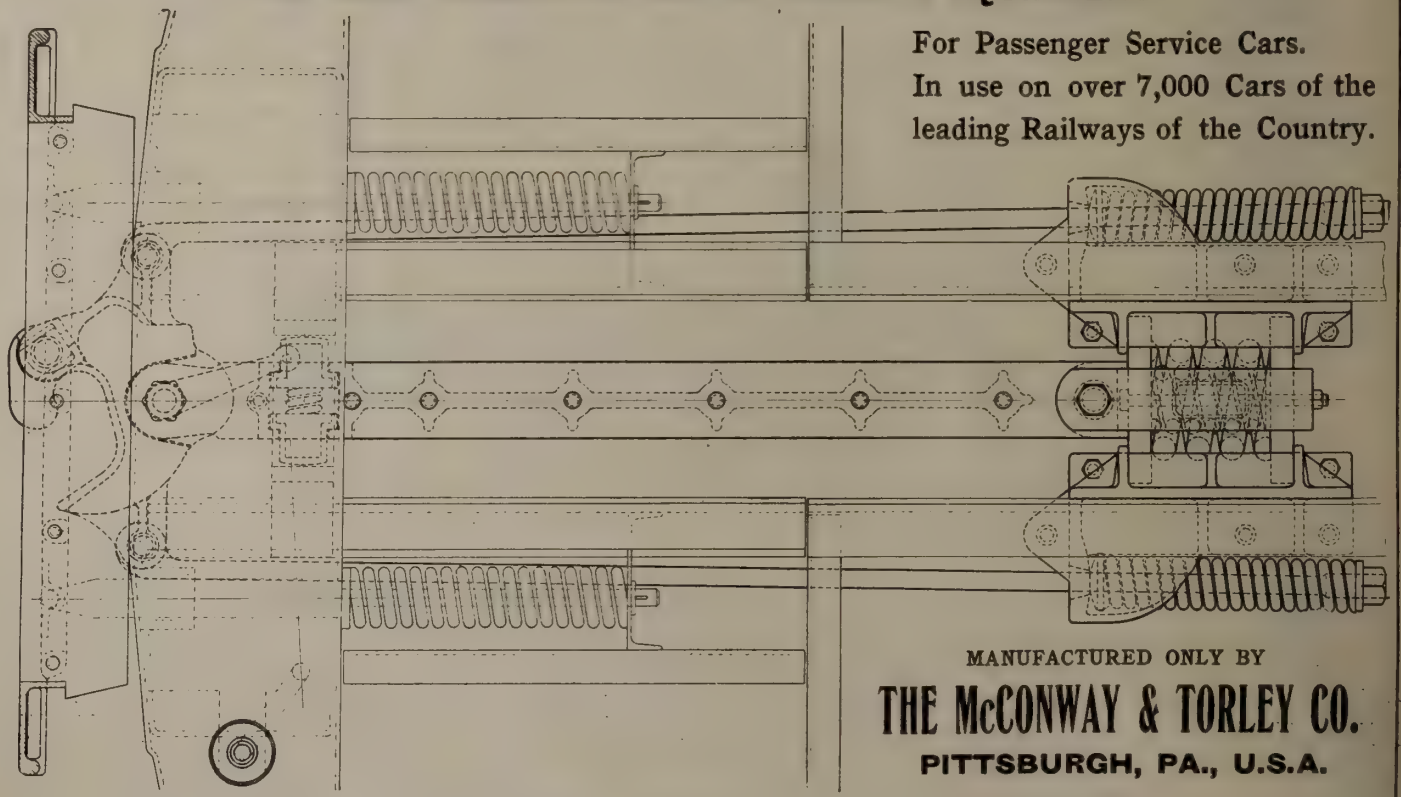

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respectively. The portion of the line from Fort Kent to the St. Francis River will parallel the St. Francis branch of the Temiscouata Ry. The incorporators of the new company are: A. H. Lewis, Chicago, Ill.; E. E. Goodrich, Waterville, Me.; V. E. Therrault, Fort Kent, Me.; P. Therrault, Grand Isle, Me.; E. R. Michaud, Frenchville, Me. See also Bangor and Aroostook Rd.

Prince Edward Island Ry.—Tenders are under consideration for the construction of an extension of the wharf at Souris, P.E.I.

Prince Edward Island Tunnel.—The question of the construction of a tunnel connecting P.E.I. and the mainland was discussed in the House of Commons recently. The Island representatives desired to have all correspondence, reports, etc., on the subject brought down, and this was agreed to. Sir Wilfrid Laurier stated that the Government was now being called upon for so many other works of public importance that it could not go further at present.

Quebec and Lake St. John Ry.—A deputation representing various interests waited on the Quebec Government, Mar. 7, and asked that provincial aid be extended to the company to enable it to construct a railway from Roberval to the Chibougamon mining district, and on to James Bay. The delegation asked either a guarantee for 20 years of the interest at 4% on $15,000 a mile for the whole distance of 420 miles between Roberval and James Bay—400 miles of main line and 20 miles of branch—and the extension of the land grant of 4,000 acres a mile from the present 30 miles to the whole 420 miles, or, failing all this, a larger land grant for the whole 420 miles.

Quebec Central Ry.—The Dominion Government has entered into a contract with the Q.C. Ry., by which a subsidy on the usual statutory conditions as to amount, etc., will be paid for the construction of a line from St. Francis to St. George, Que., 52.80 miles. The company has purchased the Russell property at Levis, Que., upon which it will erect workshops and coal chutes. (Mar., pg. 161.)

Quebec, Montreal and Southern Ry.—The Quebec Government has promised favorable consideration to an application for a subsidy for an extension of the company's line to Levis. We have been advised that the estimates for the construction of the 40 miles of line from the end of the present contract to the Quebec bridge have not been completed, and it has not yet been decided when tenders for this distance will be asked. (Mar., pg. 161.)

Sydney and Louisbourg Ry.—The Dominion Coal Co., in its annual report for 1906, refers to the opening up of two new mines in the Luigan district, which will necessitate the construction of a branch line to connect them with the S. and L. Ry. The line has been located and its construction is expected to be started early in the spring.

Temiskaming and Northern Ontario Ry.—A survey party is engaged in looking for a route for a branch from the main line near Englehart to Larder Lake, Ont., about 20 miles.

A contract has been let to McRae, Chandler and McNeil, for the construction of about 40 miles of line from the end of the Macdonnell contract to a junction with the G.T. Pacific Ry. A contract for the station buildings on the extension has been given to O'Boyle Bros., Sault Ste. Marie, Ont. (Mar., pg. 163.)

Thurlow Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title, for the purpose of constructing a railway from a junction with the G.T.R. in Thurlow tp., Hastings county, Ont., to the Bay of Quinte; with authority to connect with other railways, and to acquire and operate all railway tracks, sidings, wharves and other property belonging to the Lehigh Portland Cement Co. H. H. Macrae, Toronto, is solicitor for the applicants.

Toronto Elevated Ry.—The provisional directors named in the application for an act of incorporation to be granted by the Dominion Parliament were: M. J. Adams, J. H. L. Knight, S. R. Wickett and J. M. Sinclair, Toronto. The House of Commons has declined to grant the charter. (Mar., pg. 163.)

Toronto, Hamilton and Buffalo Ry.—A proposal for the construction of a switch 1½ miles long, at Brantford, Ont. to open up sites for industrial plants is under consideration. The T., H. and B. Ry. will construct the switch if the city will provide the right-of-way.

Toronto Eastern Entrance.—The Board of Control had before it, Mar. 19, plans showing routes for railways entering the city from the east, differing from those shown on the plans submitted to the Government by the Canadian Northern Ontario Ry., the C.P.R. and the G.T.R. The tracing submitted show several possible routes, two of which, however, do not escape cutting up the beaches and through the residential district, which was the principal ground of objection to the railway companies' plans. The gradient on these two routes is 5-10 of 1% rising southward. A route along the Don valley, with a ¾ of 1% gradient eastwards, and 6-10 of 1% gradient westwards, is shown as an alternative to the proposed route of the Canadian Northern Ontario Ry. from Ottawa. Other routes shown are short lines, necessary to connect up different sets of tracks, so as to secure a common entrance. The City Engineer has expressed an opinion that it is impossible to secure a route for a single entrance that would be suitable to all the companies.

Vancouver and Coast-Kootenay Ry.—The applicants have intimated their intention of not proceeding further with their petition for an extension of time for the construction of this projected railway, at the current session of the Dominion Parliament. The bill has, therefore, been withdrawn.

Vancouver, Victoria and Eastern Ry. and Navigation Co.—Grading is reported to have been completed from Midway to Keremeos, 96 miles, and track has been laid from Midway, B.C., to Oroville, Wash., 56 miles, and from Oroville to the crossing of the Similkameen River, eight miles. The line is being operated to Oroville. It is expected to let contracts for the construction of the line from Keremeos to Princeton during the summer.

Vancouver, Westminster and Yukon Ry.—The bridge which the V., W. and Y. Ry. will construct at the Second Narrows, Vancouver, B.C., will be 22 ft. above the C.P.R. tracks, and 50 ft. above the water level, and the swing span will allow a clear space of 150 ft. on either side.

Wolfe, Megantic and Lotbiniere Ry.—The right-of-way for this projected railway from Lime Ridge to the Quebec Bridge is reported to have been secured and negotiations are pending with the Lotbiniere and Megantic Ry. to construct the line. W. H. Lamby, Inverness, Que., is Secretary.

Yonge St. Bridge, Toronto.—The Railway Committee of the Senate having amended the Toronto City Council bill respecting the construction of the Yonge St. Bridge, by striking out the section respecting the contribution to the cost by the railway companies, the city withdrew the bill.

The Lord's Day Act, a summary of the provisions of which relating to transportation companies was given on pg. 477 of our Aug., 1906, issue, went into effect Mar. 1.

Railway Rolling Stock Notes.

The Temiskaming and Northern Ontario Ry. has received four first-class cars from the Crossen Car Manufacturing Co., Cobourg, Ont.

The C.P.R., between Feb. 14 and Mar. 14, placed orders for 10 passenger locomotives and six dining cars at its Angus, Montreal, shops.

The G.T.R. has completed its tests of a smoke consuming device at the Toronto yards, and is considering fitting it to all its shunting engines.

The Dominion Coal Co.'s balance sheet for the year ended Dec. 31, 1906, shows a liability of $265,413.46 Dominion Rolling Stock debentures, against $229,908.16 on Dec. 31, 1905.

The Central Ontario Ry. has increased its order for locomotives placed with the Canadian Locomotive Co., Kingston, Ont., from two to four. General specifications were given in our March issue, pg. 165.

The Canadian Northern Ry. has received 15 cabooses from the Crossen Car Manufacturing Co., Cobourg, Ont., and two 10-wheel freight locomotives and one switching locomotive from the Canada Foundry Co., Toronto.

The Intercolonial Ry. has turned out from its Moncton shops the parlor car Dufferin, which has been remodelled, a sleeping car, which has been refitted and provided with additional berthing accommodation, and several first-class cars which have been generally overhauled.

The J. D. McArthur Co., Ltd., contractors on the G.T. Pacific Ry., have ordered from the Dominion Dump Car Co. 20 Hart-Convertible ballast cars, 34 ft. long, 9 ft. wide, inside dimensions; 80,000 lbs. capacity, and similar to those previously sold to the G.T.P Ry. The cars are being built by the Canada Car Co., Montreal.

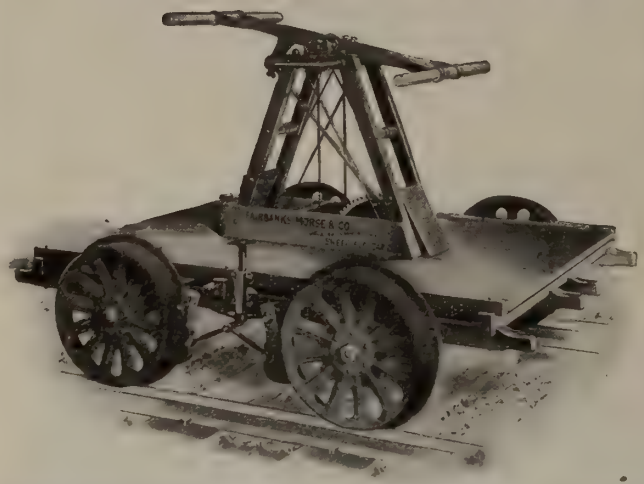
The Intercolonial Ry., between Feb. 18 and Mar. 15, placed orders for the following rolling stock: 100 box cars, 60,000 lbs. capacity; 70 dump cars, 130 hopper cars, 30,000 lbs. capacity, and five refrigerator cars, 60,000 lbs. capacity, with Rhodes, Curry & Co., Amherst, N.S.; one dining car and one sleeping car, in the United States.

The C.P.R., between Feb. 14 and Mar. 14, received 10 passenger and freight locomotives from the Locomotive and Machine Co. of Montreal; 20 steel coal cars and 29 steel ore cars from the Dominion Steel Car Co., Montreal; two switching locomotives, two freight locomotives, 11 first-class cars, 21 colonist cars, 422 box cars, 138 flat cars, from its Angus, Montreal, shops; and four vans from its Farnham, Que., shops.

The Intercolonial Ry., between Feb. 18 and Mar. 15, received the following rolling stock: Three snow plows, two box cars 60,000 lbs. capacity, and six dump cars, from Rhodes, Curry & Co., Amherst, N.S.; five consolidation freight locomotives from the Canadian Locomotive Co., Kingston, Ont. The dump cars are of the Dominion Dump Car Co.'s Hart-Convertible type, 34 ft. long and 9 ft. wide, inside measurement, and 40 tons capacity. Extra 2 ft. removable sides are provided to be used when the cars are placed into the coal service.

The Canadian Northern Ry. has built a business car, no. 18, in its Winnipeg shops for the use of Superintendent Cameron in district 1. Comfort and convenience are the principal objects rather than elegance and luxury. It is 36 ft. 10 ins. long over sills by 9 ft. 10½ ins. wide, with extension platforms at both ends. The width over all is 10 ft. 2¾ ins.; height of sill to plate, 6 ft. 8½ ins., and height—over all—bottom of sill to roof 10 ft. 7 ins. The interior is

RAILWAY SUPPLIES



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arranged with kitchen, stateroom and combined dining room, observation room and office. The interior equipment consists of kitchen with all necessary cupboards, lockers, refrigerator, etc., hot and cold water range, also attendant's berth. It has a stateroom, and an observation and office end. A speed recorder and air pressure gauge is brought up through the floor along the rear wall. Light is furnished by oil bracket lamps, and heating by Baker heater located in passage. Observation room end has large plate glass windows, and door opens into extension observation platform. The exterior is finished in standard C.N.R. color. The car is equipped with Westinghouse air brakes and 4-wheel trucks. It is said that this is the first passenger car built in Western Canada.

The Temiskaming and Northern Ontario Ry. has placed an order with the Locomotive and Machine Co. of Montreal, for six 4-6-0 class locomotives for delivery in Nov. Following are the specifications:

CYLINDER.—Type, piston; diameter, 19 in.; stroke, 24 in.

TRACTIVE POWER.—Pounds, 25,800

WHEEL BASE.—Driving and rigid, 13 ft. 6 in.; total, 23 ft. 8 in.

WEIGHT.—In working order, on drivers, 112,000 lbs.; total, 144,000 lbs.

HEATING SURFACE.—Tubes, 1,693 sq. ft.; firebox, 139 sq. ft.; total, 1,832 sq. ft. Grate area, 30 sq. ft.

AXLES.—Driving journals, main and others, 8½ by 10 in.; engine truck journals, 5½ by 10 in.; tender truck journals, 5 by 9 in.

BOILER.—Extension wagon top; outside diameter first ring, 58¼ in.; working pressure, 200 lbs.

FIREBOX.—Type, narrow; length, 103 in.; width, 42 in.; thickness of crown, ⅜ in.; tube, ½ in.; sides and back, ⅜ in.; water space—front, 4 in.; sides and back, 3½ in.

CROWN STAYING.—Radial, 1 in. diameter.

TUBES.—Number, 239; diameter, 2 in.; length, 13 ft. 2 5-16 in.; gauge, 12, B.W.G.

ENGINE TRUCK.—Four-wheel swing bolster.

GRATES.—Style, cast iron rocking.

TENDER.—Frame, 10 in. steel channels; tank, U-shape with gravity slides; capacity 5,000 imp. galls. water, 10 tons coal.

VALVES.—Piston; travel, 5¾ in.; steam lap, 1 in.; setting, 1-16 lead in full gear.

WHEELS.—Drivers—diameter outside tire, 57 in.; centres, 50 in.; materials, cast steel. Others, cast steel. Engine truck wheels, 28 in. diameter, cast iron steel tire; tender wheels, 33 in.; cast iron steel tire.

BRAKE.—Driver, Westinghouse American; tender, Westinghouse; air signal, Westinghouse

The Toronto, Hamilton and Buffalo Ry. has ordered a 4-6-0 class locomotive from the Locomotive and Machine Co. of Montreal, the specifications for which include:

CYLINDER.—Type, simple slide; diameter, 20 in.; stroke, 26 in.

TRACTIVE POWER.—Pounds, 24,200.

WHEEL BASE.—Driving, 15 ft. 10 in.; rigid, 15 ft 10 in.; total engine, 26 ft. 10 in.; total engine and tender, 57 ft. 6 in.

WEIGHT.—In working order, 183,240 lbs.; on drivers, 139,675 lbs.; total engine and tender, 294,440 lbs.

HEATING SURFACE.—Tubes, 2,631.6 sq. ft.; firebox, 159.5 sq. ft.; total, 2,791.1 sq. ft.; grate area, 46 sq. ft.

AXLES.—Driving journals, main and others, 9 by 12 in.; engine truck journals, 6 by 10 in.; tender, 5 by 9 in.

BOILER.—Type, extension wagon top; outside diameter first ring, 66⅜ in.; working pressure, 200 lbs.

FIREBOX.—Type, wide; length, 101¾ in.; width, 65¼ in.; thickness of crown, ⅜ in.; tube, ½ in.; sides ⅜ in.; back, ⅜ in.; water space, 4 in.

CROWN STAYING.—Radial, 1⅛ in. diameter.

TUBES.—Material, steel; number, 336; diameter, 2 in.; length, 15 ft. 0½ in.

GRATE.—Rocking in four sections; material, cast iron.

ENGINE TRUCK.—Four-wheel centre bearing, with 3 point hanger and wrought iron swing frame.

TENDER.—Frame, 10 in. steel, channels and plates; tank, U-shaped, with gravity slides; capacity, 5,500 U.S. galls. water, 9 tons coal.

VALVES.—Type, Richardson balanced; travel, 5½ in.; steam lap, 1⅛ in.; setting, 3-16 in. lead constant.

WHEELS.—Drivers—outside tire, 73 in.; centres, 66 in.; materials, cast steel. Others, cast steel. Engine truck, 33 in. diameter, cast iron spokes, steel tire. Tender, 33 in. diameter, cast iron chilled, 70 lbs.

BRAKES.—Driver and truck, Westinghouse American Combination; tender, Westinghouse; air signal, Westinghouse.

MAINLY ABOUT PEOPLE.

F. W. Foster, C.P.R. passenger agent at Bristol, Eng., spent some time in Montreal recently.

G. Renton, travelling engineer G.T.R., London, Ont., was killed in a recent collision on the G.T.R. there.

R. Miller, C.P.R. station master, Windsor St. station, Montreal, has returned to duty after a trip to Europe.

G. Spencer, C.P.R. Superintendent North Bay, Ont., has recovered from a serious attack of pneumonia.

The engagement is announced of R. W. Robb, of the Robb Engineering Co., Amherst, N.S., to Miss M. Pugsley.

W. Harty, M.P., President Canadian Locomotive Co., Kingston, Ont., is mentioned as a likely appointee to the Senate.

Sir Wm. C. Van Horne returned to Montreal, Mar. 8, from Cuba, where he had been in his capacity as President of the Cuba Co.

B. R. Hepburn, shipowner, Picton, Ont., was slightly injured in an accident on the New York Central Rd., at Tivoli, N.Y., Mar. 5.

T. F. Griffin, who was at one time largely engaged in the car wheel trade in the U.S. and Canada, died at Chicago, Ill., recently, aged 80.

Miss E. Strevel, second daughter of G. Strevel, railway contractor, Winnipeg, was married to F. A. Connor, Portage la Prairie, Man., recently.

W. Jarman, who was for 40 years G.T.R. ticket agent in the old Union Station, Toronto, and Mrs. Jarman, celebrated their golden wedding recently.

Hon. J. S. Hendrie, Hamilton, Ont., has been elected President of the Canadian Artillery Association, at its annual meeting in Ottawa, Feb. 28.

F. A. Goss, heretofore city passenger and ticket agent, Delaware, Lackawanna and Western Rd., Buffalo, N.Y., has resigned to engage in private business.

N. J. Hopkins, who died at Owen Sound, Ont., Mar. 5, was the inventor of a car coupler which received high commendation at the Chicago Exposition.

John Macdonald, lumberman, who died at Lindsay, Ont., Mar. 1, carried out several contracts on the C.P.R., in British Columbia, between 1884 and 1887.

H. T. Jaeger, General Eastern Agent, Passenger Department, Erie Rd., Buffalo, N.Y., died there Mar. 20, aged 45, after an operation for appendecitus.

C. P. Sclater, Secretary-Treasurer Bell Telephone Co. of Canada, died in Montreal Mar. 24, of pneumonia. He was born in Dover, Eng., and was aged 57.

Hon. J. B. Snowball, Lieutenant-Governor of New Brunswick, who died suddenly in Fredericton, Feb. 27, constructed the Chatham branch of the Intercolonial Ry.

J. Merrin, who started engine driving on the East Lancashire Ry., England, in 1846, and entered the G.T.R. service in 1857, died at Kingston, Ont., Mar. 9, aged 76.

W. W. Jackson, G.T.R. roadmaster Sarnia branch, was presented with a gold watch and chain Feb. 26, on leaving the company's service to go to Medicine Hat, Alta.

G. N. Bowman, formerly mechanical accountant in the G.T.R. offices, St. Thomas, Ont., who has resided for the past six years at Vancouver, B.C., died there recently.

W. McNab, Assistant Engineer G.T.R., delivered a lecture before the Nomads Club of Montreal, Mar. 13, on the principles and practice of locating a great railway line.

J. H. Howden has been appointed Minister of Railways in the Manitoba Government. It is proposed to give him charge of the provincial telegraph and telephone lines later on.

J. G. Farmer, Hamilton, Ont., has been appointed solicitor to the Ontario Railway and Municipal Board, succeeding C. C. Robinson, who died at Toronto, Mar. 2, somewhat suddenly.

Capt. H. A. Rogers, Royal Engineers, son of Lieut.-Col. H. C. Rogers, Peterborough, Ont., has been appointed Inspector of Prisons in England and Wales by the Imperial Government.

C. J. Panser, C.P.R. roadmaster, was presented with an address by the road employes, on the occasion of his recent transfer from the Souris branch to the Winnipeg Beach and Teulon lines.

Mrs. Scott, who died at St. Thomas recently, aged 87, was the widow of Wm. Scott, Chief Engineer in charge of the construction of the old Great Western Ry. between London and Windsor, Ont.

J. D. Warde, who recently resigned his position in the Provincial Secretary's Department, Toronto, has been appointed Secretary-Treasurer of the Canada Railway News Co., Toronto.

G. M. Mullins, who has left the G.T.R. local freight office, Toronto, to join the Costa Rica Northern Ry. staff at San Jose, Costa Rica, was presented with a travelling bag by the G.T.R. staff, Mar. 1.

A. G. Peden, who died at Ottawa, Mar. 6, aged 68, was Superintendent of the old Ottawa and Prescott Ry., and subsequently auditor Canada Atlantic Ry. He retired from active work in 1900.

D. D. Mann, of Mackenzie, Mann & Co., Ltd., and A. W. Mackenzie, Treasurer Canadian Northern Ry., are provisional directors of the Toronto Hunt, Ltd., which has just been incorporated.

W. M. Kirkpatrick was entertained at dinner by representative freight men of Montreal and other places, Feb. 27, on leaving to take up his new duties as General Freight Agent, C.P.R., at St. John, N.B.

Sir C. Rivers Wilson, President G.T.R., has recovered from a severe attack of la grippe. He is expected to pay his annual visit to Canada, in company with Lady Wilson, during the current month.

R. Reid, one of the members of the National Transcontinental Ry. Commission, has served notices in an action for libel against the London, Ont., Free Press, arising out of some comments made upon a purchase of envelopes for the Commission.

N. S. Dunlop, Tax and Insurance Commissioner and Claims Adjuster, C.P.R., was among the injured in the accident near Mountain, Ont., Mar. 1. He was able to leave the hospital Mar. 6, and left Montreal Mar. 20, for Florida.

Jas. Gillespie, who died at Winnipeg recently, was a meat contractor during the C.P.R. construction and was interested in the construction of the line from Winnipeg to St. Laurent, Man., which was intended to be an outlet to Hudson Bay.

W. B. Leather, civil engineer and architect, died at St. Catharines, Ont., recently, aged 86. He was engaged on the Intercolonial Ry., and on the G.T.R. in Canada, and prior to retiring in 1896, was employed on the Atchison, Topeka and Santa Fe Rd.

J. D. Maclennan, C.E., of Cleveland, Ohio, who died in New York, Mar. 1, was a son of R. Maclennan, C.E., Toronto, and was engaged on the engineering staff of the C.P.R., and in contracts with Jas. Conmee on the C.P.R. during the construction period.

J. D. Beatty, for many years Secretary-Treasurer of the Northwestern Transportation Co., when it was known as the Beatty Line, and latterly President Sarnia Street Ry., was among those injured in the recent accident on the G.T.R. near Guelph, Ont.

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CORISTINE BUILDING, - - - MONTREAL.

M. C. Roach, who resigned his position as Assistant General Passenger Agent, New York Central and Hudson River Rd. recently, had been engaged with that company since 1873, with the exception of three years, 1881-84, when he was Western Passenger Agent, C.P.R.

L. B. Archibald, Superintendent Dining and Pullman Cars, Intercolonial Ry, attended the recent convention of the Association of Superintendents of Railway Dining Car Service of America, held at Louisville, Ky. He acted as President of the Association during the past year.

Alex. Gibson, Marysville, N.B., the builder and owner of the Canada Eastern Ry., recently sold to the Intercolonial Ry., has recovered from a severe attack of pneumonia. Considerably anxiety was felt as to his condition early in March, owing to his having reached his 87th year.

H. Sutherland, Executive Agent, Canadian Northern Ry., Winnipeg, and his partner, have sold their third interest in the Columbia River Lumber Co. to a Duluth firm, the price paid, it is reported, being $1,000,000. The other two-thirds interest is held by W. Mackenzie, President Canadian Northern Ry.

J. A. L. Waddell, Kansas City, Mo., the Canadian who designed the Fraser River Bridge in British Columbia, has been appointed a member of an order established by the Grand Duchess Olga, sister of the Czar of Russia, in recognition of his services as Principal Engineer of the Trans-Alaska-Siberian Ry. This railway is still in the promotion stage.

W. W. Neeland, who has been appointed General Storekeeper, Alberta Ry. and Irrigation Co., Lethbridge, Alta., was born in North Gower, Carleton County, Ont., Feb. 4, 1855, and entered railway service in 1883, his record being: April, 1883, to 1885, in C.P.R. stores department at Winnipeg; 1885 to Jan., 1898, C.P.R. storekeeper, Moose Jaw, Sask.; Jan., 1898, to April, 1905, C.P.R. storekeeper, Fort William, Ont.; April, 1905, to Mar., 1907, storekeeper, Central Division, C.P.R., Winnipeg.

G. G. Mackay, who has been appointed C.P.R. city ticket agent, Detroit, Mich., was born in Hamilton, Ont., June 13, 1876, and entered railway service in 1893, his record being: Feb., 1893, to Feb., 1905, successively as assistant agent and operator, and ticket agent and operator G.T.R.; Feb., 1905, to June, 1906, assistant ticket agent, Pere Marquette Rd., and Cincinnati, Hamilton and Dayton Rd., Detroit; June, 1906, to Feb., 1907, chief clerk to C.P.R. city ticket agent., Detroit.

J. H. Joseph, who died at Montreal, Feb 28, aged 92, was one of the 30 merchants who organized the first telegraph company in Canada. He was also a member of the company which built the first telegraphic connection between Canada and the U.S.; and of the Newfoundland Telegraph Co. In railway matters he was associated with the Champlain Ry., one of the first lines in Canada; and with the line to Rouse's Point, now part of the G.T.R. He was for some years President of the Montreal Grain Elevating Co.

Thos. Foley, railway contractor, who died at St. Paul, Minn., Feb. 27, aged 68, was born in Lanark County, Ont., 1839, and moved to St. Cloud, Minn., in 1881, where he engaged in railway construction in partnership with his three brothers, Timothy, John and N. H. The firm of Foley Bros., and latterly Foley Bros. and Larson, has carried out some of the largest contracts in the U.S. and Canada, and at present has extensive contracts on the C.P.R. and the G.T. Pacific Ry. The firm also traded as Foley Bros. and Kelly, St. Paul, and Foley, Locke and Larson, Winnipeg, wholesale provision dealers, in connection with their contracting operations.

P. Mooney, who was recently appointed General Freight and Passenger Agent, Halifax and Southwestern Ry., was born at St. Catherines, Que., April 19, 1871, and entered railway service Nov., 1889, his record being: Nov., 1889, to Dec., 1897, stenographer and chief clerk to Superintendent Intercolonial Ry., Riviere du Loup, Que.; Mar., 1898, to Feb., 1901, clerk in General Freight and Passenger Department, Quebec and Lake St. John Ry., Quebec; Feb., 1901, to Mar., 1906, chief clerk, General Freight and Passenger office, Great Northern Ry., Quebec; Mar., 1906, to Jan., 1907, District Freight and Passenger Agent, Halifax and Southwestern Ry., Halifax, N.S

J. K. Savage, who has been appointed trainmaster C.P.R. at Brandon, Man., was born at Forreston, Ill., Oct. 5, 1876. He entered the C.P.R. service Mar. 1, 1890, as station agent at South Stukely, Que., since which he has been successively to May 1, 1894, station agent and operator at various stations in Quebec Province; May 1, 1894, to May 24 1897, train dispatcher, Farnham, Que.; Jan. to Sept., 1904, Night Chief Train Dispatcher, Toronto; Sept., 1904, to Sept., 1906, Inspector Train Dispatching Western Lines, Winnipeg; Sept., 1906, to Mar. 1, 1907, Chief Dispatcher, District 1, Central Division, Kenora, Ont.; Mar. 1, 1907, to date, Trainmaster District 3, Central Division, Brandon, Man.

C. S. Maharg, who has been appointed superintendent district 3, Central Division C.P.R., at Brandon, Man., was born in Dufferin County, Ont., Feb., 1867. He entered railway service with the C.P.R. in April, 1885, as freight brakeman; since which he has been successively: Feb., 1888, freight conductor; May, 1893, to Dec., 1901, passenger conductor; to June, 1902, rule instructor; to Aug., 1902, passenger conductor; Aug., 1902, to Dec., 1904, trainmaster, district 1, Ontario Division; Dec., 1904, to June, 1906, trainmaster, Kenora, Ont.; June to Aug., 1906, Assistant Superintendent Kenora, Ont.; Aug., 1906, to Feb. 28, 1907, Assistant Superintendent, Moose Jaw, Sask.; Feb. 28, 1907, to date, Superintendent district 3, Central Division, entire service with C.P.R.

It is reported that H. B. Jagoe, General Eastern Passenger Agent, West Shore Rd., New York, has resigned, and that he will not return to railway service. He was born at Hamilton, Ont., Mar. 29, 1857, and entered railway service 1872, since which he has been consecutively, to 1877, on Great Western Ry. as telegraph operator, ticket agent, freight clerk and train despatcher, Oct., 1877, to 1880, station agent, Hamilton and Northwestern Ry.; 1880 to Mar., 1882, ticket agent, Northern and Northwestern Ry.; Mar., 1882, to Mar., 1884, in charge passenger business same road at Toronto, and also agent New England Transportation Co.; Mar., 1884, to Mar., 1887, successively, freight agent and agent passenger department West Shore Rd.; since Mar. 1, 1887, General Eastern Passenger Agent same road at New York.

Col. R. R. McLellan, who died at Cornwall, Ont., Mar. 7, aged 65, was engaged most of his life in railway construction, beginning in Nova Scotia on the I.C.R.; and subsequently being engaged on the Annapolis Valley Ry., now a part of the Dominion Atlantic Ry. Going west he was engaged on the construction of the first railway in Manitoba, and was Superintendent when the first train was run into the province He built several sections of the C.P.R., the most important being on the north shore of Lake Superior. He retired from contracting in 1886, and took up his residence in his native county, which he represented in the House of Commons for 10 years from 1891. He was offered the office of Minister of Railways and Canals by Sir Mackenzie Bowell, but declined it. In his younger days he achieved distinction as an athlete, his records in hammer-throwing being quite remarkable.

H. W. Gays, whose portrait appears on the first page of this issue, was born at Brant, Erie county, N.Y., Mar. 21, 1848. Entered railway service Jan. 1, 1861, since which he has been consecutively to Dec. 31, 1862, messenger, and Jan. 31, 1863, to March 31, 1864, telegraph operator Erie Ry. at Dunkirk, N.Y.; April 1, 1864, to March 18, 1867, assistant cashier, and Oct. 1, 1867, to July 31, 1869, cashier Buffalo and Erie Ry, same place; Aug. 1, 1869, to June 30, 1874, cashier; and July 1, 1874, to May 30, 1877, general agent Louisville and Cincinnati Mail Line Steamers; June 1, 1877, to March 31, 1879, general agent, and April 1, 1879, to March 30, 1885, Assistant General Freight Agent, Cleveland, Columbus, Cincinnati and Indianapolis Ry., and Jan. 1, 1881 to April 30, 1885, also General Freight Agent, Indianapolis and St. Louis Ry.; July 1 to Oct. 31, 1885, in charge traffic; Nov. 1, 1885, to May 30, 1886, Superintendent; June 1, 1886, to Nov. 30, 1889, Manager Wiggins' Ferry Co., and East St. Louis Connecting Ry., and operated lines at St. Louis; Dec. 1, 1889, to Aug. 1, 1894, General Manager St. Louis Merchants' Bridge and Terminal Ry.; Aug. 1, 1894, to July, 1896, Traffic Manager St. Louis, Chicago and St. Paul Ry.; July, 1896, to Feb., 1899, General Manager same road, and hicago, Peoria and St. Louis Ry.; Feb., 1899, to April 25, 1900, General Manager New York and Ottawa Rd.; Nov., 1899, to April 25, 1900, also President, and April 25, 1900, was appointed Receiver same road; March 1, 1899, Manager Ottawa and New York Ry., and Nov., 1899, also President and Receiver same road. He retained these positions until the N.Y. and O. Rd., which owned the O. and N.Y. Ry., was sold by order of the New York courts in 1904, to the New York Central and Hudson River Rd., when he was appointed General Manager.

Pullman Co's Taxation.—The Treasurer of Ontario replying to a question in the Legislature recently stated that in 1906 the Pullman Co. paid to the province $1,748.33 as a tax under the Supplementary Revenue Act, sec. 13, being at the rate of ¼ of 1% upon the capital of the company invested in cars and rolling stock in use in Ontario during the previous year. The average number of cars in use in the province during 1906 was: Standard cars, 48.191, valued at $10,000 each, $481,910; parlor cars, 5.401, valued at $6,000 each; immigrant or tourist cars, 2.037, valued at $5,000 each, $10,185; total valuation, $524,501. The valuation of 1904 was standard cars, $7,250 each; parlor cars, $5,000 each; tourist cars, $3,500 each.

The Canadian Car Service Bureau, Western Lines, has been organized to take over the Canadian Freight Association, Western Lines, car rental department. The car service committee is composed of J. A. MacGregor, Assistant Superintendent Car Service, C.P.R.; A. Belbeck, Superintendent Winnipeg Terminals, C.P.R.; A. Wilcox, Superintendent Canadian Northern Ry., and J. P. Driscoll, Superintendent Car Service, Canadian Northern Ry. The manager is H. R. Patriarche, 101 Bon Accord Building, Winnipeg. Meetings are held the third Wednesday of each month. The Bureau's territory is C.P.R., Port Arthur to Laggan and Crow's Nest, and all intervening branches; Canadian Northern Ry.; Alberta Ry. and Irrigation Co.'s railway.

The Board of Railway Commissioners has approved of standard passenger tariff C.R.C. no. W 38 (supplement 5), for the C.P.R. line between Curzon Jct. and Kingsgate, Sask. on the basis of 4 cents a mile.

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RIVETED STEEL HEATER, with Double Coils. Meets the demand for a smaller and cheaper Heater than our Fire Proofs.

PERFECTED HEATERS, Single and Double Coils.

The "MIGHTY MIDGET" HEATER, 19 inches in diameter. This Heater is especially adapted to ELECTRIC CARS.

STEAM ATTACHMENTS, to circulate the water of the Baker Heater by steam from the locomotive; or will circulate hot water independently of any Heater.

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RUSSELL INSPECTION CARS

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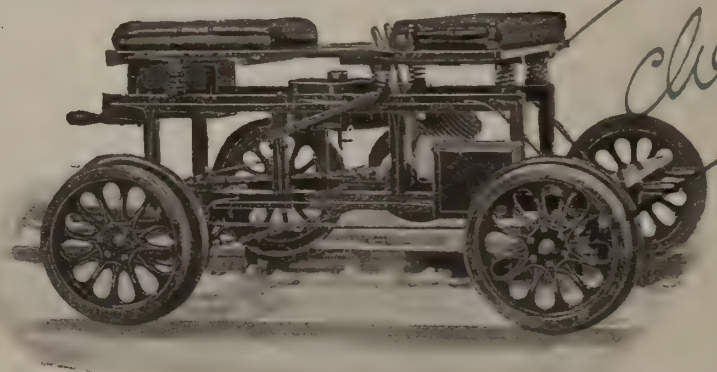

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20 miles per hour—the normal and economic speed. Readily lifted from the tracks by two men. Power—ample to carry four men and luggage.

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TRANSPORTATION APPOINTMENTS.

Alberta Ry. and Irrigation Co.—W. W. Neeland, heretofore storekeeper C.P.R., Winnipeg, has been appointed General Storekeeper A. Ry. and I. Co. Office, Lethbridge, Alta.

Board of Railway Commissioners.—Jas. Ogilvie, heretofore Master Mechanic G.T.R. at Ottawa, has been appointed Inspector of Rolling Stock and General Equipment of Railways for the Board.

Canadian Pacific Ry.—F. M. Rutter has been appointed Resident Engineer at Woodstock, N.B., vice G. G. Hare, who has been appointed engineer of the Kingston & Pembroke Ry.

R. W. Burnett has been appointed Assistant Master Car Builder, lines east of Port Arthur, succeeding S. King, resigned, to become Superintendent Canada Car Co.

E. Fitzgerald, heretofore Assistant to the General Purchasing Agent, has been appointed Assistant General Purchasing Agent.

We are advised that it is the intention to transfer C. Kyle, Master Mechanic of the Lake Superior Division at White River, Ont., back again to Montreal, to his previous position as Master Mechanic Eastern Division, and that C. A. Stark, now Assistant Master Mechanic at North Bay, will then be made Master Mechanic Lake Superior Division.

F. W. Nichols, formerly assistant roadmaster at London, Ont., has been appointed roadmaster at Orangeville, Ont., vice A. Cameron, transferred.

A. Cameron, heretofore roadmaster at Orangeville, Ont., has been appointed roadmaster at London, Ont., vice A. McAuley, resigned.

P. Coakey, heretofore track inspector Toronto-Sudbury branch, has been appointed assistant roadmaster at London, Ont., vice F. W. Nicholls, promoted.

J. H. Hughes, heretofore Trainmaster, district 1, Lake Superior Division, North Bay, Ont., has been appointed Assistant Superintendent there.

H. G. Reid has been appointed locomotive foreman at Chapleau, Ont., vice W. H. Fletcher, resigned.

R. Ferguson is reported to have been appointed roadmaster Fort William terminals.

The Central Division has been re-divided as follows:

Fort William Terminals, Port Arthur to Westfort, inclusive. J. G. Taylor, heretofore Assistant Superintendent at Fort William, has been appointed Superintendent.

First District, Fort William, Ignace and Kenora sections, Lac du Bonnet branch. J. J. Scully, Superintendent. Office, Kenora, Ont.

Second District, Brandon and Minnedosa sections, Varcoe branch. Winnipeg Beach, Teulon and Emerson branches. Souris section and Elm Creek branch. La Riviere section and Gretna branch. J. T. Arundle, Superintendent. Office, Winnipeg.

Winnipeg Terminals, Whittier Jct. to Rugby Jct. and St. Boniface, inclusive. A. Belbeck, Superintendent. Office, Winnipeg.

Third District, Broadview section, including Brandon and Broadview terminals, Pheasant Hills branch, Rapid City section, Lenore and Miniota branches, Yorkton section, including Minnedosa terminal, Russell and Sheho branches. C. S. Maharg, heretofore Assistant Superintendent at Moose Jaw, Sask., has been appointed Superintendent. Office, Brandon, Man.

Fourth District, Lyleton section, Napinka and Mowbray branches, Estevan section, Arcola section, including Arcola and Reston branch. G. E. Graham, heretofore Assistant Superintendent at Brandon, has been appointed Superintendent. Office, Brandon, Man.

Fifth District, Moose Jaw, Swift Current, Portal and Moose Mountain sections. J. Brownlee, Superintendent, Moose Jaw, Sask.

The offices of Assistant Superintendent at Fort William, Brandon and Moose Jaw have been abolished.

R. McGregor, heretofore Trainmaster Kenora, Ont., has been appointed Trainmaster over Fort William section between Ignace and Eagle. Office, Ignace, Ont.

H. J. Coffin, heretofore Trainmaster Brandon, Man., has been appointed Trainmaster over Kenora section, between Eagle and Kenora. Office, Kenora, Ont.

J. J. Horn, heretofore Night Chief Train Dispatcher, district 1, Central Division, has been appointed Chief Train Dispatcher, vice J. K. Savage, transferred. Office, Kenora, Ont.

R. C. Wilton, heretofore train dispatcher, district 1, Central Division, has been appointed Night Chief Train Dispatcher, vice J. J. Horn, promoted. Office, Kenora, Ont.

G. Thompson has been appointed Trainmaster District 2, Central Division. Office, Winnipeg.

F. T. Anderson has been appointed car distributor, Central Division, at Winnipeg.

D. McKay has been appointed Trainmaster district 2, Central Division. Office at Portage la Prairie, Man.

The territory of the following roadmasters on the Central Division, has been arranged as given: C. J. Panser, Rugby Jct. to Komarno, Rugby Jct. to Gimli. R. M. Binney, Whittier Jct. to Emerson, Rugby Jct. to Manitou, Rosenfeld Jct. to Gretna. P. Carlson, Manitou to Lyleton, Rudyard to Kaleida, Woodbay to Mowbray, Deloraine to Napinka. P. E. Barry, Rugby Jct. to Souris, Elm Creek to Carman.

J. K. Savage, heretofore Chief Train Dispatcher, Kenora, Ont., has been appointed Trainmaster, district 3, Central Division. Office at Brandon, Man.

S. Worth, heretofore Chief Train Dispatcher, Moose Jaw, has been appointed Trainmaster district 5, Central Division. Office, Moose Jaw, Sask.

R. F. Chapman, heretofore train dispatcher at Brandon, Man., has been appointed Chief Train Dispatcher, district 5, Central Division. Office, Moose Jaw, Sask.

J. M. McKay, heretofore Trainmaster, old district 2, Winnipeg, has been transferred to the Souris section.

Cuba Co.—R. B. Van Horne has been appointed Assistant to the Manager Cuba Co's Rd.

Delaware and Hudson Rd.—W. J. Mullin, heretofore Assistant to the Second Vice-President, has been appointed General Traffic Manager.

Grand Trunk-Lackawanna Line.—W. H. Burke, heretofore G.T.R. Agent at Jackson, Mich., has been appointed travelling freight agent G.T.-L. Line. Headquarters, Chicago, Ill.

Grand Trunk Ry. — F. H. McGuigan, Fourth Vice-President, has resigned to enter the Great Northern Ry. (U.S.) service.

J. R. Donnelly has been appointed Master Mechanic, Ottawa Division, succeeding Jas. Ogilvie, resigned. Office, Ottawa, Ont.

Geo. Cooper has been appointed road foreman of engines, Middle and Southern Divisions, succeeding G. Renton, recently killed at London, Ont. Headquarters, Sarnia Tunnel, Ont.

The following agents have been appointed: Sutton, Ont., R. Dunn (Acting); Georgetown, Ont., N. A. McCallum; Grimsby, Ont., D. F. McGregor; Kerwood, Ont., G. J. Dowding; Harley, Ont., T. H. Sumner; Burgessville, Ont., W. R. Plant; Belgrave, Ont., C. R. Anderson.

Grand Trunk Pacific Ry.—O. O. Winter, heretofore Superintendent C.P.R. at Brandon, Man., and previously at Fort William, Ont., has been appointed to a position on the G.T.P.R. staff, but no official announcement has been made as to what it is. Unconfirmed press reports state that he will be placed in charge of the operating staff, which will be organized at Fort William, Ont.

G. A. McNicholl, heretofore private secretary to F. W. Morse, Vice-President and General Manager, has been appointed Pacific Coast Purchasing Agent. Headquarters, Vancouver, B.C.

Great Northern Ry., U.S.—F. S. Forest, heretofore Assistant General Superintendent, Central Division, Minot, N.D., has been appointed General Superintendent Western Division, Spokane, Wash., succeeding H. A. Kennedy, whose title was Assistant General Superintendent.

R. W. Bryan, heretofore General Superintendent of Transportation, St. Paul, Minn., has been appointed Assistant General Superintendent Central Division, Minot, N.D.

Kingston & Pembroke Ry.—G. G. Hare, heretofore Resident Engineer C.P.R. Woodstock, N.B., has been appointed engineer K. & P. R. Office, Kingston, Ont.

New York Central Lines.—M. C. Roach, heretofore Assistant General Passenger Agent New York Central and Hudson River Rd., has resigned to go into private business.

Pere Marquette Rd.—W. C. Groening, general foreman shops, St. Thomas, Ont., has been transferred to Grand Rapids, Mich.

National Transcontinental Railway.

The final surveys and location of the Eastern Division from Quebec to Winnipeg, it is stated, show a line of 1,349½ miles. The route through New Brunswick, it is reported, has been decided upon, but no official announcement had been made to Mar. 20. Press reports state that of the three routes surveyed, the engineers recommend the adoption of the back route between Chipman and Grand Falls. The adoption of the route, it is stated, will require the use of a pusher for westbound traffic for a distance of about 17 miles. The route will be 47 miles shorter than the route surveyed by the St. John River valley, and 18 miles shorter than the third route surveyed. The last mentioned route was laid out so as to provide the standard gradients, and its cost was consequently the heaviest of the three.

The Commissioners have authorized the construction of three buildings for the use of the engineering staff between Moncton and Chipman, N.B. The buildings will be of frame and will be located at Hemlock Ridge, near Canaan, a point 15 miles north of Havelock, and eight miles east of Chipman, respectively. H. Ryan, of the Commissioners' engineering staff, is superintending their erection.

Tenders have been received for the construction and erection of six steel bridges in District F., at the following points between Winnipeg and Lake Superior Junction: Wabigoon River, Winnipeg River, C.P.R. crossing, Whitemouth River, Brokenhead River, east branch; Brokenhead River, west branch. The class of load which the bridges are to carry is that designated as heavy in the general specifications for steel bridges of the Department of Railways.

GRAND TRUNK PACIFIC RY

Glyn, Mills, Currie & Co., London, Eng., have offered £1,000,000 4% G.T.P. Ry. debenture stock at par, the proceeds of which is to be devoted to the purchase of rolling stock for the equipment of the line. The stock, which is part of an authorized issue of £3,000,000, is redeemable at 105, Mar. 1,

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1936, or thereafter on one year's notice. It ranks next after the first mortgage bonds and certain other securities, and is guaranteed by the G.T.R. out of the net earnings after deducting its own fixed charges. Press reports state that only 70% of the issue has been applied for.

Arrangements have been concluded between the G.T.P.R. and Port Arthur Town Council for an entrance into that town. The company's terminals are to be at Bare point, and it will use, jointly with the Canadian Northern Ry., the eastern tracks leading to the terminals. Mayor Clavet stated, Mar. 12, on his return from Montreal, where the agreement was signed, that the companies would probably use a joint station.

Maps of the route between Winnipeg and Portage la Prairie show that the line will cross the C.P.R. near Darwin, proceeding through the property purchased by the company outside the city, then going northerly, passing the city about three-quarters of a mile north of the C.P.R. shops, and continuing almost a straight line to Portage la Prairie. In connection with the construction westerly, it is stated that over 100 towns will be founded during the year between Winnipeg and Edmonton.

The Acting Chief Commissioner of Works for British Columbia has approved of the plans for the G.T.P.R. in that province. The plans show a line entering at the Yellowhead Pass, running north of Cowdun and Moose Lakes, and following the north bank of the south fork of the Fraser River, until it is joined by the north fork. The river is crossed near Fort George. The line leaves the fort on the south and runs almost due west of Fraser Lake; thence northwest along the northeast bank of the Endakow River and Burns and Duker lakes to the headwaters of the South Bulkley valley. It follows the Bulkley River on the east side and crosses the Skeena. At Hazelton the line turns to the southwest and follows the north bank of the Skeena to its mouth, then crosses to the Kaien Island terminus. The chief characteristic of the route is its avoidance of long bridges and the following of waterways the entire distance, except across the divide between the streams at the head of Decker Lake and the headquarters of the South Bulkley River.

The British Columbia Government, with a view of settling provincial rights as to Indian reserves, has decided to refuse registration to the grant of lands in the Tsimpsean reserve, made by the Dominion Government to the G.T.P.R. The ground taken on behalf of the Province is that the surrender of the lands by the Indians caused a reversion of title to the Province, and that the Dominion has no rights in the matter.

Tenders are under consideration for the construction of an hotel at Prince Rupert. It will be of frame, will have 60 bedrooms, with dining rooms, billiard room and other conveniences. It is expected to have the building finished during the summer. The building will be so arranged that the bedroom accommodation can be increased to 200 rooms.

In our last issue it was stated that contracts for building three sections of the National Transcontinental Ry. had been awarded to the Grand Trunk Pacific Construction Co. The contracts were given to the G.T. Pacific Railway Co.

The House of Commons Railway Committee has approved of the G.T.R. Co.'s bill authorizing it to acquire lands, wharves, buildings, etc., and to establish a pension fund for its employes with all necessary powers for the management of the same. The clause striking out the section in the original act of incorporation as to third-class trains, and penny a mile fares, was dropped.

Railway Commissioners' Rate Orders.

2674. Mar. 13.—In the matter of the application of the Cumming Manufacturing Co., Ltd., under the Railway Act, 1903, sections 252, 253, 254, 255, and 257, for an order directing the G.T.Ry. Co. to cease from charging excessive and discriminatory rates on logs and lumber shipped from points on its railway east of Rainy Lake, Ont., consigned to the applicant company at Renfrew, Ont. The Board orders that the G.T.R. is hereby directed to reduce its rate on logs, in carloads, of the minimum weight of 35,000 lbs. a car carried between Brule Lake and Renfrew, Ont., for the purpose of manufacture and reshipment of the products thereof, to 5c. per 100 lbs.

REDUCTION OF PASSENGER FARES

2690. Mar. 18.—In the matter of the application of the Associated Boards of Trade of Western Canada, under the Railway Act, for a reduction in the passenger rates of the railway companies operating in the Provinces of Alberta and Saskatchewan, and in the matter of the complaints of the Kingston Board of Trade, Kingston, Ont.; the corporations of the townships of Clarke, Darlington, Murray, East Whitby, and Pickering, and the corporations of the towns of Oshawa and Bowmanville, Ont., alleging that the passenger rates charged by the G.T.R. are excessive. Upon hearing the G.T.R. and the C.P.R. companies, the Board orders that the C.P.R. and the G.T.R. companies reduce their passenger rates on all the lines of the respective companies in Canada, east of and including the Calgary and Edmonton Ry., so that the same shall not exceed 3c. a mile. That the said reduction take effect within 60 days from the date of this order, within which time the passenger tariffs of the said companies are to be altered and made effective accordingly.

C.P.R. Betterments, Construction, Etc.

Atlantic Division Bridge Construction.—Tenders are being received for the construction of concrete abutments and piers at the following bridges: Two abutments at Russiagornis, N.B., Fredericton branch; two abutments each at two bridges, at Lieford, N.B., Tobique branch; two abutments at Fort Fairfield, Me., Aroostook branch; two abutments and one pier, at Grand River, N.B.; two abutments and three piers, Aroostook Jct., N.B.; two abutments and three piers, Grand Falls, N.B., Edmundston, branch.

Standard Explosives Limited Spur.—Plans have been deposited with the Board of Railway Commissioners for a spur line from mileage 18.3, Ste. Jeanne de L'Ile Perrot, Que., to the premises of the Standard Explosives Limited.

Westmount Improvements.—We were advised, Mar. 16, that the plans for the station at Westmount, Que., had not been completed. The new building is estimated to cost $10,000. No further extension of the Glen yards is at present contemplated.

Tillsonburg, Lake Erie and Pacific Ry.—A subsidy contract has been entered into by the Dominion Government for the construction of a railway from Woodstock, or from Ingersoll to Stratford, Ont., not exceeding 35 miles.

Guelph and Goderich Ry.—It is expected that work will be sufficiently advanced to permit trains being run to Wellington St., Goderich, Ont., by the end of May.

Toronto-Sudbury Line.—The divisional point on this line will be at Muskoka, Ont., at which place a roundhouse and other buildings will be constructed. The line is not yet opened to this point, but it is expected that the track will be laid and a train service in operation early in June.

Port Arthur Station.—A new station building is to be constructed at Port Arthur, Ont. The plans provide for a handsome building with central clock tower at the street elevation, the waiting rooms and public offices opening directly on to the track. The baggage and express offices are at one end of the platform, being connected with the main building by a covered platform; and there is a lengthy covered platform at the other end of the main building.

Kenora Locomotive House.—A contract is reported let to Kelly Bros. & Co., for the erection of a locomotive house in the east yards, Kenora, Ont., at a cost of about $100,000. The site of the new roundhouse will be near the old brick yard.

Dock at Winnipeg Beach.—The dock which the C.P.R. constructed during the winter at Winnipeg Beach, Man., is a T-shaped structure, the head being 150 by 12 ft., and the shore connection 100 ft. long. It is a trestle work on pile foundations.

Teulon to Icelandie River.—It is proposed to extend the line now terminating at Teulon, northerly to Icelandie River, Man., about 37 miles.

Winnipeg Car Shops, etc.—The extension of the car shops at Winnipeg was one of the works which it was proposed to undertake during the current year, but we have not been advised that the present appropriations provide for the work. Daily press reports say the work will cost approximately $550,000, and that the buildings will include passenger car shops, 100 by 241 ft.; freight car shops, 103 by 313 ft.; planing mill, 102 by 217 ft.; blacksmith shop, 102 by 217 ft.; locomotive shop, 794 by 165 ft.; foundry, 122 by 92 ft.; general stores and offices, 86 by 254 ft.; dry kiln, 86 by 42 ft.; and power house, 126 by 100 ft.

Western Lines.—In addition to the betterments and improvements mentioned under the separate divisions, a large amount of other work, most of which is already in hand, will be pushed forward towards completion. These works include the second track construction between Fort William and Winnipeg, the greater part of which it is expected to have completed by the end of the season; the grade reduction work between Medicine Hat and Calgary, Alta.; and the diversion of the line between Lethbridge and Macleod, Alta. Apart from the buildings to be put up, repairs will be made at a great many stations, new platforms will be built, new freight sheds put up, and existing freight sheds enlarged. A number of water softening plants will be installed on the Central and Western Divisions between Rennie and Laggan. Stock yard accommodation will be increased at a number of points, new water supplies will be provided and existing supplies improved; many new sidings will be put in, and existing ones lengthened. A number of tunnels in the mountains on the Pacific Division will be lined with concrete. Considerable bridge filling will be undertaken on all three divisions, also permanent work on the bridges, bringing them up to standard. The roads and trails in the vicinity of the company's hotels in the mountains will be improved; repairs will be made to all the old and new docks and wharves on the Kootenay Lakes A considerable amount will be expended on clearing right-of-way, trimming track, and widening banks and cuts. Additional machinery and tools will also be provided for all shops on the Western Lines.

Central Division Betterments, etc.—Following are some details showing the work of betterment and improvement to be undertaken during the current year:

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BALLASTING AND TRACK-WIDENING.—Brandon section, 17 miles; Souris section, 65 miles; Winnipeg Beach branch, 10 miles; Emerson branch, 28 miles; Portal section, 50 miles; total, 170 miles.

NEW 80-LB. STEEL.—Emerson section, 63.6 miles; Winnipeg and Fort William, 50 miles; Souris section, 65 miles; Winnipeg Beach branch, 47 miles; second track between Winnipeg and Fort William, 170 miles; total, 395.6 miles.

NEW STEEL BRIDGES.—Lyleton branch, one 100 ft. deck plate girder; Broadview section, three 40 ft. through plate girders; Swift Current section, ten 15 ft., one 18 ft. and two 20 ft. deck plate girders.

FENCING.—Brandon section, 30 miles; Broadview section, 40 miles; Minnedosa section, 20 miles; Yorkton section, 20 miles; Russell branch, 5 miles; Rapid City branch, 10 miles; Miniota branch, 10 miles; Arcola section, 20 miles; Moose Jaw section, 20 miles; Swift Current section, 25 miles; Portal section, 25 miles; total, 230 miles.

BUILDINGS.—Eight new stations, 25 section houses, 19 tool houses and 28 portable depots.

TERMINAL IMPROVEMENTS.—New station at Port Arthur, Ont. New double-deck freight sheds, alterations and additions to yards, and improvements to coaling plant at Fort William, Ont. Lodging and recreation building for employes at Ignace, Ont. Extension to pavilion, Winnipeg Beach. Double main track between Higgin Ave. and Red River Bridge, Winnipeg; fencing, lighting and other improvements to courtyard of station and hotel, Winnipeg. Machine shop at Brandon, Man. Addition to engine house at Souris, Man. New 12-stall locomotive house at Moose Jaw, Sask., and addition to locomotive house at Estevan, Sask.

TIES.—Number of ties required for renewals on the division, 894,101.

Winnipeg to Edmonton.—A number of stretches of line have been under construction during the past two or three seasons, which it is proposed to connect up during the present season so as to afford a shorter and more direct route between Winnipeg and Strathcona than the C.P.R. has at present, via Calgary. The Manitoba and Northwestern Ry., which at present extends to Sheho, will be extended to Saskatoon, and about midway between these two points will be joined by the Pheasant Hills branch, now being operated from Kirkella, Man., to Strassburg, Sask. At Saskatoon the line will connect with a line already under construction westerly to meet the branch of the Calgary and Edmonton Ry., now in operation from Wetaskiwin easterly to Daysland, Alta. The bridge which will be erected over the Saskatchewan River at Saskatoon, to connect the two sections of the line, will be of steel on a concrete substructure. This substructure will consist of two abutments and nine piers. The piers will be 40 by 20 ft. at the base, and will rise to a height of 56 ft. above the level of the ice in the river. The contract for the substructure has been let to the J. McDiarmid Co., Winnipeg, the estimated cost being $150,000.

Reston-Wolseley Branch.—This branch is in operation from Reston, Man., on the Souris-Arcola-Regina line, to Kaiser, 99 miles, and it is expected to have it completed to Wolseley on the main transcontinental line, mileage 122, during the current year.

Lauder Westerly.—A line is under construction from Lauder, Man., westerly, and it is hoped to complete it to mileage 33 during the current year.

Weyburn to Stoughton.—The line under construction from Weyburn to Stoughton, Sask., to connect the Portal section with the Arcola-Regina line, will be completed during the current year.

THE C.P.R. CO'S EMPRESS HOTEL, VICTORIA, B.C.

Moose Jaw Northwesterly.—Construction on this branch will be continued during the current year, and it is expected to have it completed to the 50th mile by the end of the season.

Improvements at Dunmore Jct.—Tenders have been asked for the construction of a 4-stall locomotive house at Coleridge, Alta., the point on the C.P.R. better known as Dunmore Jct., Alta. Local reports state that the increasing traffic on the Crow's Nest Pass line, necessitates a change in the conditions of operations, and that the company has under contemplation the development of a divisional point there and the closing up of the present shops, etc., at Medicine Hat, Alta.

Lethbridge Joint Freight Shed.—The new freight shed erected at Lethbridge, Alta., for the joint use of the C.P.R., and the Alberta Ry. and Irrigation Co., at a cost of $15,000, has been completed. The building is of galvanized iron on a concrete foundation.

Western Division Betterments, etc.—The betterments, etc., which it is proposed to carry out on the Western Division during the current year include the following:

BALLASTING AND BANK WIDENING.—Medicine Hat section, 15 miles; Calgary section, 35 miles; Laggan section, 10 miles; Edmonton section, 55 miles; Macleod branch, 53 miles; total, 168 miles.

NEW 80-LB. STEEL.—Bredenbury to Esterhazy, 21 miles; Crow's Nest line, 118.5 miles; total, 139.5 miles.

NEW STEEL BRIDGES.—Medicine Hat section, four 30 ft. h. deck-plate girders, and one 100 ft. through lattice girder. Edmonton branch, two 175 ft. through truss spans. Macleod branch, two 150 through lattice girders. Cranbrook section, three 30 ft. h. deck-plate girders. Sirdar section, one 40 ft. h. deck-plate girder.

FENCING.—Calgary section, 10 miles; Laggan section, 68 miles; Lethbridge section, 68 miles; Cranbrook section, 16 miles; Sirdar branch, 11 miles; total 173 miles.

BUILDINGS.—Eight new stations, five section houses, 11 tool houses.

TERMINAL IMPROVEMENTS.—Six-stall addition to locomotive house at Swift Current, Sask.; six-stall addition to engine house, extension to boiler house and a new ice house, at Medicine Hat, Alta.; extension to ice house, extension to blacksmith shop, extension to freight shed, and the completion of an extension to engine house at Calgary, Alta.; new station at Strathcona, Alta.; new ice house and six-stall addition to roundhouse at Lethbridge, Alta; new ice house and completion terminal facilities at Macleod, Alta.; six-stall addition to engine house, new coaling plant, and additional yard accommodation at Cranbrook, B.C.; additional coaling facilities, Sirdar, B.C.; completion of terminals at Crow's Nest, B.C.

TIES.—Number of ties required for renewals on Western Division, 401,481.

Nicola, Kamloops and Similkameen Ry.—The section of the line from Spence's Bridge to Nicola, B.C., it was expected, would be taken over Mar. 1, but owing to the change in General Superintendents, the transfer from the contractors was postponed. F. F. Busteed, the new General Superintendent, was expected to make his inspection and take over the line by Mar. 30.

Pacific Division Betterments, etc.—The betterments and improvements to be undertaken on the Division during the current year include:

BALLASTING AND BANK WIDENING.—Mountain section, 71 miles; Shuswap section, 45 miles; Thompson section, 3 miles; Cascade section, 15 miles; Boundary section, 7 miles; total, 141 miles.

NEW 80-LB. STEEL.—The main line is fully laid with 80-lb. steel from Laggan to Vancouver, B.C., and no further 80-lb. steel will be laid on the division during the year.

NEW STEEL BRIDGES.—Mountain section, one 150 ft. through truss span and one 50 ft. deck-plate girder. Nakusp and Slocan Ry., one 80 ft. deck-plate girder. Rossland branch one 100 ft. through plate girder. Shuswap section, two 40 ft. and two 100 ft. deck-plate girders, three 150 ft. deck trusses; one 150 ft. through truss and one 150 ft. deck truss. Cascade section, four 75 ft. through girders.

FENCING.—Mountain section, 3 miles; Thompson section, 10 miles; Cascade section, 25 miles; Boundary section, 7 miles; total, 45 miles.

BUILDINGS.—Three new stations, 11 section houses, 5 tool houses, and 16 bunk houses for Chinese.

TERMINAL IMPROVEMENTS.—Four-stall addition to locomotive house at Field, B.C. New station and freight shed at Kamloops, B.C. Repairs to station, new platform, shop extension and new tank at Nelson, B.C. Additional yard accommodation at Golden, B.C. Electric plant at Revelstoke, B.C. New sea wall on water front, new transfer slip, new express building, extensive yard and shop improvements at Vancouver, B.C. Wharf improvements and completion of hotel at Victoria, B.C.

TIES.—Number of ties required for renewals on the division during the current year, 476,908.

Esquimalt and Nanaimo Ry.—It is proposed during the current year to put up 35 miles of wire fencing, to replace 48 miles of light rails with heavier steel, to bring the bridges up to the C.P.R. standard; to provide additional yard accommodation at various points, to provide shelters for passengers, and to have explorations and surveys made throughout Vancouver Island with a view of the construction of additional lines.

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THE CANADIAN NORTHERN ONTARIO WAY

THIS SUMMER

C. E. Cartwright, Division Engineer, Vancouver, stated in an interview recently, that a great deal of topographical information as to the interior of the island had been received but the reports from the survey parties were incomplete. It was hoped to have the preliminary operations completed by the early summer, but the actual work of construction of any extensions would not be undertaken before 1908. A survey party was working between Wellington and Alberni, and another along the east coast. The company had decided upon the construction of a line to the west coast of the island, but the question was as to the best route. One route under consideration was from Duncan to Sarita Bay, which would develop an entirely new country, and necessitate carrying the line to an altitude of 600 ft. above sea level. The other route being considered was from Wellington to Alberni, thence to Comox. This route would be more expensive to construct, as it would be necessary to surmount an elevation of 1,250 ft., according to present surveys. R. Marpole, Vice-President E. and N. Ry., and General Executive Assistant, C.P.R., subsequently stated that Mr. Cartwright had outlined the situation correctly, and added that nothing had been decided upon as to construction, or any other developments on the island.

A press report is current that the B.C. Electric Ry. is making surveys with a view of securing a water power sufficient for the operation of the E. and N. Ry., as well as its own lines in Victoria. The officials of the E. and N. Ry state that there is nothing in the report, but the B.C.E. Ry.'s local manager said the matter had been considered but that no advances had been made to the C.P.R., and would not be until it was ascertained if the plan was at all practicable.

Minneapolis, St. Paul & Sault Ste. Marie Ry.—U.S. press reports state that a contract has been let for construction of a line to Duluth, Minn., and Superior, Wis., from Brooten, Minn., a distance of about 200 miles. It is said that the line will cross the Northern Pacific at Moose Lake and Royalton. This will make practically a direct line from Brooten to Superior.

Canadian Northern Railway Construction.

New Brunswick.—In the New Brunswick Legislature Mar. 21, Premier Pugsley said the Provincial Government was considering a proposal from Mackenzie, Mann & Co. to build a railway down the St. John River valley to Westfield, and expressed the hope that such a line would form part of a transcontinental system with St. John as its terminus.

Running Rights over I.C.R.—Ottawa despatches credit Mackenzie, Mann & Co. with being interested in negotiations now going on with the Dominion Government to secure running rights over the Intercolonial Ry., from the southern end of Quebec Bridge to Halifax, N.S. The Canadian Northern Quebec Ry. will connect with the Quebec Bridge, and its Quebec-New Brunswick and Nova Scotia Ry. charter gives it authority to construct a line to the Atlantic Coast near Guysboro, N.S. The C.P.R. is negotiating for running rights over the Intercolonial Ry., and in connection with its proposal to the Government the Moncton Board of Trade passed a resolution Mar. 5, suggesting that the consideration of the same be postponed until such time as the Canadian Northern Ry. interests were in a position to ask for running rights.

Canadian Northern Ontario Ry.—A deputation representing property owners in the east end waited on the Toronto Board of Control, Mar. 1, and objected to the grant of land in the Don Valley in exchange for an 80 ft. roadway. It was explained that the land which the city proposed to grant was a strip 1,800 ft. long, varying from 40 to 300 ft. in width, and that if the company expropriated a strip 100 ft. wide right through the city property at this point, as it might do, the result would be most objectionable. The Board decided to give further consideration to the matter. The city has been notified that the coal yards, roundhouse, repair shops, etc., will be located at the extreme north end of the Don flats, and that the strip which it is desired to obtain from the city will be utilized for straightening the Don, and for tracks.

The House of Commons Railway Committee has approved of the company's act authorizing it to construct a large number of additional lines in Ontario. A clause in the act as to the time within which construction might be gone on with was dropped, as it was objected to by the Minister of Railways on the ground that it would have extended the time for the construction of other lines in Ontario, for which the company holds parliamentary authority. The lines authorized to be constructed by the act are: from Washago to Lake Huron, at or near Kincardine; from near Arnprior to the St. Lawrence River, near Gananoque; from near Pembroke southwesterly to Lake Ontario, at or near Cobourg or Port Hope; from the Toronto-Ottawa line northwesterly to Georgian Bay, at or near Collingwood or Owen Sound; from east of Toronto, passing through Toronto, Hamilton, and London, to Windsor, with branches to St. Thomas and Sarnia, and a branch or loop passing north of Toronto; from the Niagara River passing through Hamilton to Lake Huron near Goderich; from Lake Erie west of Port Colborne, passing through Brantford or Berlin to Georgian Bay; from Washago to Georgian Bay east of Collingwood; from north of Montreal to Leeds or Lanark county; from Parry Sound northwesterly to North Bay.

Nepigon Ry.—The Ontario Legislature has approved of an extension of time for the construction of the line, and for its amalgamation with the Canadian Northern Ry. A provision was inserted in the bill to the effect that the agreement of amalgamation must be sanctioned by the Ontario Railway and Municipal Board. The company has power to construct a railway from Nepigon Bay on Lake Superior northerly, and subsidies were voted in 1902 for the construction of the first 14 miles.

Canadian Northern Ry.—The project for the construction of a line to connect Port Arthur, Ont., and Duluth, Minn., has been revived and it is reported that C.N.R. interests have begun negotiations with U.S. railway interests for the construction of the line. The C.N.R. system includes the old Port Arthur, Duluth and Western Ry., which is operated to Gunflint Narrows, at the International boundary. Surveys were made in 1902 for the extension from this point towards Duluth, but the project was dropped.

Railroad Pocket Book. A handy sized book has been published by the Derry-Collard Co., New York, with this title, at $1, or with note book leaves at $1.50. It is described as a quick reference cyclopedia of railway information. F. H. Colvin is the author, and he has collected and arranged in a most compact and convenient form a large amount of useful and practical information, not only for those actually engaged in railway work, but also for the general reader who is often at a loss to find an explanation of the technical terms which are being more often used in the non-professional press than formerly. The line illustrations and charts are valuable aids to the text.

G.T.R. Betterments, Construction, Etc.

St. Lambert-Ste. Rosalie Second Track. Tenders were invited recently for the construction of a second track between St. Lambert and Ste. Rosalie, Que., about 31 miles. This work will also include the improvement in several places of the gradients on the existing line, together with a short diversion of the track in the vicinity of St. Hilaire. The contract will only include the earthwork; the ballasting, tracklaying and masonry work will be done by the G.T.R. staff.

Montreal Terminal Facilities.—The rearrangement of the freight handling facilities at Montreal has brought about an improvement of the conditions there, and the opening of the new yards at Turcot will add 75% to the storing and handling capacity of the Montreal terminals. The company has purchased several parcels of land at St. Lambert, and it is reported that it is intended to erect a car building plant there. It is also reported that the existing locomotive works and car repair shops at Point St. Charles are to be enlarged

Track Elevation at Montreal.—The City Council has approved of the proposal to assist the G.T.R. to abolish level crossings, and to elevate its tracks in the city, by a grant of $2,000,000. A report upon the matter had not been presented by the Level Crossings Committee, which has the matter in hand, as the plans are at present incomplete, but it was desired to affirm the principle that the tracks must be raised. As the tracks were in existence before the crossings, and therefore, if the city did not assist the company, the crossings would remain. The Level Crossings Committee proposes to visit Philadelphia to inspect elevated tracks and railway crossings in that city.

Ottawa Station and Hotel.—The Ontario Legislature is being asked at its current session for an act authorizing the Ottawa City Council to respectively grant fixed assessments of $150,000 and $500,000 upon a central union passenger station and a hotel to be constructed by the G.T.R., at a cost of $250,000 for the station, and $1,000,000 for the hotel; and to provide for the cost of widening Little Sussex St. for the purpose of the erection of the station and hotel, by the issue of debentures.

Toronto-Hamilton Line.—A start has been made near Hamilton, in relaying the 38 miles between that city and Toronto, with 100 lb. rails in place of the present 80-lb. steel.

London Track Elevation.—This question has been again under consideration by the railway committee of the City Council, but nothing has been decided, and the G.T.R. management has not been approached on the matter. F. H. McGuigan, Fourth Vice-President, said the G.T.R. management was ready to discuss the whole question whenever the city was ready.

We are advised that the G.T. Pacific Ry. Co. will probably sub-let before April 10, the three sections of the National Trans-Continental Ry. for which its tenders were accepted by the Commissioners recently.

The National Association of Car Service Managers has issued a statement showing the number of cars reported, and the average detention in days by railways and consignees for the quarter ended Dec. 31, 1906. The Canadian Association reports: 283,450 cars, .41 average detention by railways; 1.66 average detention by consignees, against 111,845 cars for the quarter ended Dec., 1905. The average detention of the cars is not reported for 1905.

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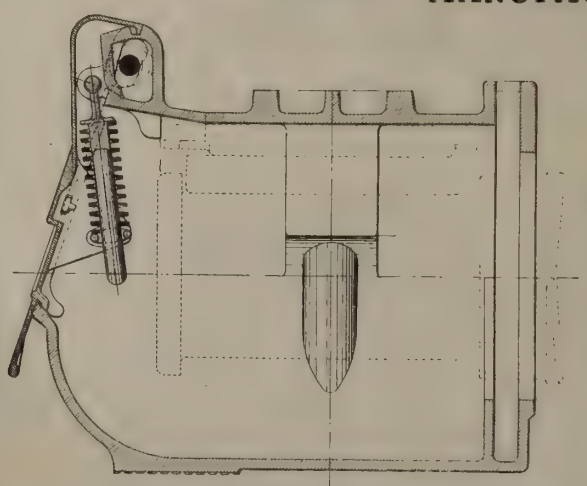

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The Chilled Cast-Iron Wheel.

By W. E. Fowler, Master Car Builder, Canadian Pacific Railway.

The chilled cast-iron car wheel would appear to be a product peculiar to this continent. I believe its birthplace was here, and certainly its home is with the American, and particularly the North American railways. I do not think it would be untrue to say, that without it, the immense mileage attained by railways on this continent would not have been possible. It certainly is true that it has been a great factor in the economical operation of our railways, and a primary feature which, in the evolution of the modern railway, has not been crowded out of existence, because it cannot be dispensed with. There is not another essential part of the freight car equipment which costs the railway companies so little money, compared with the service rendered, as does the cast-iron car wheel. The 600-pound wheel costs about $10.80 new, and after giving a mileage of 40 to 70 thousand, it is turned back to the foundry at a scrap value of about $7.80, giving a cost per 1,000 miles of about 5c. Can it be possible that this showing can ever be beaten with any other kind of wheel? I very seriously doubt it. An English railway official, a short time ago, asked in all seriousness, "Is it possible that you are still using cast-iron car wheels? We would be afraid to use them under any of our cars, light as they are." And my answer was, "I do not see how we can do without them."

The origin of the chilled wheel I am unable to state, but that it originated in the U.S. there is no reason to doubt. I remember, however, 25 years ago, that there was quite a variety of cast-iron car wheels. There were the single plate wheels, some with and some without raised ribs or spokes, some corrugated and some plain. Double plate wheels there were of many sections, and both single and double plate wheels were made in all sizes from 30 to 42 ins. in diameter, with long hubs and short hubs, some having their greatest projection beyond the outside, and some beyond the inside, with width of tread and thickness of flange varying also (but not so widely) until the M.C.B. Association succeeded in getting adopted a standard wheel diameter, a standard section of tread and flange, a standard length of hub, and a standard diameter of wheel seat for each size of axle. We are in full possession of all the benefits derived from these standards, beyond computation as they are, and it is hard to believe that there are railway officials to-day who do not appreciate what the M.C.B. Association has achieved in this and other matters, and what may yet be done with proper support and recognition.

The factory or foundry where the wheels are made is a never-failing attraction, and its lay-out and equipment intensely important. Until a few years ago the wheel foundry was usually laid out in circular floors or moulding sections, each floor being served by a jib crane set in its centre for handling the chills and moulds while being rammed up and prepared for the hot metal, for handling the hot metal in the ladles while filling the moulds, and for handling the hot wheels while being taken from the moulds and started towards the annealing pits. The circular floor, however, was not economical of space nor labor, and it is rapidly giving way to the electrically-operated foundry, laid out in rectangles, the Angus foundry of the C.P.R. being one of the latest and most improved of this type. This foundry is laid out with the core rooms, with their ovens, the elevator cupolas, and charging floors, along one side of the building. The floors or moulding equipments are laid out in parallel lines with 9 ft. centres, each with a capacity of 20 wheels. The hot metal is supplied by buggy ladles along one end of these floors, and the finished hot wheels removed by buggies or lorries along the opposite end, one end of the building being devoted to the pits for annealing the wheels, the stacking floor to receive them after being removed from the pits, and the foreman's office.

The manufacture of the wheels commences at the breaker where old car wheels (to the extent of from 40% to 60% of the weight of new wheels turned out) are broken by the big drop weight, the foreman carefully inspecting the broken pieces, so that he may determine what proportion and variety of new pig shall be used with each charge. The hot wheels are placed in the annealing pits as soon as practicable, that is, when cool enough to handle with no danger of warping or bleeding, after being placed in the pits. The wheels remain in the pits about 4 days, cooling slowly and uniformly, but are generally as hot as can be comfortably handled when taken out. After being taken out they are cleaned, inspected, taped, and tested, representative wheels being taken for the latter purpose. The thermal is the only test now in force at Angus, the severity of it being sufficient, it is considered, to permit dispensing with the drop test, which was the old stand-by. Cracked plates, cracked brackets, shelled out spots, worn flat spots, and treads worn hollow, are defects of manufacture, and should not be considered as evidence of general unreliability of the cast-iron wheel, as they can be avoided by putting better material and more careful work into the wheel. Worn flanges are generally traceable to one of the following causes: Trucks which do not curve easily, couplers without sufficient lateral clearance, cutting by brake shoes, and inaccurate mating of wheels. I believe that proper care is very rarely given to the last named operation, and in consequence, wheels one or more tape sizes apart are sometimes mounted on the same axle, to begin, as soon as put in service, destructive flange wear, and increased load on the engine Until quite recently, the part the brake shoe plays in flange wear has been given very little attention, but the air brake men, in their deliberations, have called attention to the poor service given by brake shoes set too wide apart, which in consequence of this form flanges on the shoes over the wheel rims, frequently leaving less than half the area of the brake shoe in contact with the wheel tread, with the resultant loss of frictional contact, and a waste of brake shoe metal. But the wheel flange also suffers by this improper arrangement.

Too little attention is given to the proper hanging of brake beams, to the centering of the brake heads, with relation to the tread of the wheels, as also to the necessity of uniformity in the length of the brake hangers. Any of these defective practices will result in poor braking service and injury to the wheel. A brake shoe when first applied may overlap the rim of the wheel ever so little, but with each reduction of its thickness in service the lap will increase, and the brake shoe on the other end of the brake beam will be forced more and more against the flange of the wheel, gradually bringing about the condition described as worn flange. I have described this condition particularly, because it is one which is not generally given the consideration it deserves, and I am sure that if brake heads are set at 60 in. centres, instead of 60½ ins., that a considerable reduction of flange wear will be noted, and we will wear out our brake shoes evenly and uniformly, and get the work out of them for which they are made.

The importance and value of the cast-iron wheel in railway service lies unquestionably in the wearing qualities of its tread or tire, the more than steely hardness of which gives more mileage for the same amount of wear (or metal removed) than any other wheel in existence. And not only does it stand up well under its present service conditions—that of carrying heavy loads over steel rails made as hard as they can be without danger of breaking, it also withstands with comparative freedom from failure the tremendous friction of the brake shoes when making stops from a high speed, or when descending long, heavy grades. It is not uncommon in mountain districts to see the grease on the face of the wheels smoking from this cause, the wheels themselves being too hot to touch and the brake shoes red hot, and it will be, I think, very difficult to produce materials of any other kind which will give us wheels so serviceable, so economically manufactured and so valuable when worn out, as the chilled cast-iron wheel.

The design of the present wheel is a matter of evolution, or survival of the fittest. The amount of iron in the hub is that which has been found necessary in service to stand not only the pressure at which the wheel is forced on the axle without fracture, but the tremendous force exerted by the brakes when a stop is being made, which tends to loosening of the wheel on the axle seat, unless forced on at the proper pressure, which pressure cannot safely be applied without the proper amount of metal in the hub. The length of the hub has also of course much to do with the question of thickness of it, and the pressure at which the wheels are mounted, but both have been decided by that safest of teachers, experience, and there is practically no dissent from the M.C.B. Association's standard practice of to-day. The size and form of the ring core, as it is called, which gives the inner surfaces of the double plates their proper thickness and outline, is also the result of long experience and test, many slight variations have now given away, the last design of ring core submitted by the M.C.B. Association being in general use.

The number and form of the brackets is to some extent not uniform, the M.C.B.'s form and number not yet being accepted by some as the most desirable, but it will require more experience and longer service to determine whether the increased number of brackets, and consequent increase of weight, will do all that is claimed for them. With the experience had on the C.P.R., I believe they will, for reasons to be given later.

The outline of the tread was recently subjected to some change by the M.C.B. Association, the slight increase in the coning making it 1 in 20, instead of 1 in 25 as formerly, and the making of the coning simple instead of duplex, being done to cause the wheel to run more nearly upon the centre of the tread and away from the flange, which is the weak part of the cast-iron wheel of to-day. But is this weakness surprising? The flange of the wheel of 1905 was originally designed for cars of 20,000 and 30,000 lbs. capacity, the length of these cars was from 20 to 28 ft., and they were run at speeds of from 10 to 20 miles an hour, and yet under cars of 80,000 to 100,000 lbs. capacity, run at speeds of 30 to 45 miles an hour, the same flange has done fairly well, but there have been many failures.

The flange, amply strong under the light cars, developed a tendency to break off at the throat, there not being enough metal there to withstand the brake shoe and rail friction, the latter being aggravated by the heavy car, and by the heavy lateral thrust against the rail of the wheel going at high speeds, evidence of the trouble developing first in the form of fine cracks, fine as a hair, which appear at or near the throat of the flange, and which, in continued service, extend around the wheel and into the tread, until sometimes it can be seen under the tread, having continued through the body of it, and extended across one or two of the brackets, and unless removed at once the wheel is ripe for serious trouble. The number of wheel flanges broken during the past few years

(Continued on page 263.)

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The Chilled Cast-Iron Wheel.

(*Continued from page 259*)

has been the cause of serious concern to the mechanical departments of the railways, and the M.C.B. Association, after becoming convinced that flange failures of this kind were not confined to the wheels made in any particular foundry, and accordingly not due to any special mixture, placed the matter in the care of a committee who recommended at the last convention that the thickness of the flange be increased by 1/8 in. when measured at the gauge line, this increased thickness tapering to nothing near the apex of the flange. In doing this they have the sanction of the Maintenance of Way and the American Railway Associations, which were satisfied, after close investigation, that this increased thickness would necessitate no change in frog or guard rail clearance, and the thicker flange has since been adopted by M.C.B. Association letter ballot, so that the benefits of this improvement should soon be apparent.

It is probable, however, that this will not entirely remove the trouble, and it may be necessary at some future time to further strengthen the flange. In an endeavor to supplement this strengthening of the flange we have, on the C.P.R., changed the section of the wheel, making no change however in the tread and flange outer outline. The change consists in making the brackets to a smaller radius, and so extending them under the throat of the flange as to make them practically continuous, and thereby add materially to the thickness of metal at this point. This practice, while not in service long enough to demonstrate the full value of it, has been of such value as to extend its application to C.P.R. wheels for cars of all capacities, having been first proven valuable under heavy service.

Let it not be forgotten, however, that first-class service cannot be expected from wheels made with poor materials. The finest quality of charcoal iron is none too good for the cast-iron wheel, and in as large proportion as conditions will permit. Some of the largest wheel manufacturers on this continent state that wheels can be made from new charcoal iron that will meet the requirements of any railway service, whether passenger or freight, which would indicate that the price paid is to some extent responsible for wheel failures. Do not forget also that the best wheels made can be so misused during the assembling operations as to cut short their life. Bore them out of true, or locate them at different distances from the centre of the axle, or mate wheels of different tapes on the same axle, and long before the guarantee limit is reached one wheel will have a worn flange. There are other causes for worn flanges, as has been said, but those just referred to are within the province of the men who mount the wheels on the axles to prevent, and they must do so.

I know of no reason why so essential a part of the freight car cannot be so modified and improved as to be perfectly safe and economical under cars of the highest capacity, and if its friends will only stand by it, will successfully meet and overcome competition of any kind, and from any source whatever.

The foregoing paper was read before the Canadian Ry. Club recently.

The Treasurer of Ontario intimated in the Legislature recently, that there would not be any increase in the taxation on railways this session.

W. H. Jenkins, B.A., formerly Registrar of the Ontario Education Department and Secretary of the Education Council, who died at Madoc, Ont., Mar. 25, was a brother of B. S. Jenkins, General Superintendent C.P.R. Telegraphs, Winnipeg.

F. H. McGuigan Leaves the G.T.R.

F. H. McGuigan, Fourth Vice-President G.T.R., severed his connection with that company Mar. 30, to enter the service of the Great Northern Ry. (U.S.A.). Up to the time of writing, his title had not been definitely announced, but a press report credited the President, J. J. Hill, with stating that Mr. McGuigan would be appointed 1st Vice-President. It is said that L. W. Hill, now Vice-President, will be appointed Assistant to the President. Mr. McGuigan was entertained at a farewell dinner at the Canada Club, Montreal, Mar. 30, by a number of transportation officials and others.

Mr. McGuigan was born at Cleveland, Ohio, in 1850. He entered railway service in 1883, as water boy, Erie and Pittsburg Division, Pennsylvania Rd., after which he held to 1874 various minor positions same road, his subsequent record being: 1874 to 1880, roadmaster same road; April 19 to July 1, 1880, foreman construction train, St. Louis and Omaha division, Wabash Rd.; July 1, 1880, to Jan. 1, 1885, division roadmaster, same road; Jan. 1, 1885, to 1888, general roadmaster, lines west of Mississippi River; 1888 to Dec. 31, 1895, Superintendent Western Division, same road, at Kansas City, Mo.; Feb. 15, 1896, to Mar. 1, 1902, General Superintendent; G.T.R.; Mar. 1, 1902, to Jan. 1, 1905, Manager G.T.R.; Jan. 1, 1905, to Mar. 30, 1907, Fourth Vice-President G.T.R.

Up to Mar. 30, no announcement had been made as to Mr. McGuigan's successor on the G.T.R. Press reports mention G. C. Jones, General Manager Central Vermont Ry., and W. G. Brownlee, Superintendent Middle Division G.T.R. Other reports say the Fourth Vice-Presidency is likely to be abolished and that a General Superintendent will probably be appointed.

The G.T.R. and Two Cent Fares.

The Ontario Court of Appeal delivered judgment, Mar. 14, in the case in which C. M. Hays, Second Vice-President and General Manager G.T.R., was charged with failing to run third-class trains and to carry passengers at a penny a mile as provided by the charter. The judgment was on a stated case as agreed, a summary of which was given in our March issue, pg. 153. The court quashed the conviction.

Justice Osler's judgment, which was endorsed by Chief Justice Moss, said: "This conviction is open to a great many objections, most of which, I should say, are fatal to it, but only one or two of the most obvious must be noticed. The defendant has been summarily tried under the act incorporating the G.T.R. Co., and under a section of the Criminal Code, that enacts that every one is guilty of an indictable offence and liable to two years' imprisonment, who, without lawful excuse, disobeys any act of Parliament, unless some penalty or other mode of punishment is expressly provided by law. The section of the Act incorporating the company relied on by the prosecution, enacts that the 'fare for each third-class passenger by any train on the said railway shall not exceed one penny currency for each mile, and that at least one train having in it third-class passengers shall run every day throughout the length of line. The complaint is that the defendant—not the company—has disobeyed this section of omitting to do that which the section required to be done. The magistrate found that the company had not during 1906 permitted a third-class passenger to travel by any train on said railway at the fare of one penny currency for each mile and, further, that the said company had not during that time provided that at least one train having in it third-class carriages should run each day between Kingston and Toronto. Upon these findings the magistrate proceeded to convict the defendant, C. M. Hays, though no formal conviction seems to have been drawn up, of the offence charged against the company. Upon the mere statement of the case the answer must be that the conviction is wrong. The charge is that Hays committed the offence, while the findings are that the company did so. In the absence of any clear statutory enactment, the defendant cannot be punished for the default of his company. There is no authority to prosecute the defendant. The obligation, if there be one, is the company's, and the company, and not its official, however important and commanding the position which he occupies, is the one to be prosecuted."

Regarding the act of 1852, Justice Osler said that the question whether it was unofficially repealed by the act of 1903, was one for the Railway Commission, whose decision was subject to reversal by the Supreme Court. Written judgments by Justices McLaren and Meredith concurring in the conclusion, were also handed out.

Unconfirmed Press Reports.

That H. G. Elliot, Assistant General Passenger Agent, G.T.R., Montreal, is to be transferred to the Central Vermont Ry.

That J. D. McDonald, District Passenger Agent, G.T.R., Toronto, is to be transferred to Montreal, and that W. Duperow, travelling agent, Toronto, will succeed him.

That G. J. Bury, Assistant General Manager C.P.R. Western Lines, has been offered the General Managership of the Chicago, Rock Island and Pacific Rd

That E. A. James, Manager Canadian Northern Ry., will retire at an early date and that he will not re-enter railway service. Mr. James has denied this report.

The Necessity of Technical Education For Mechanics.

By R. Paterson, Master Mechanic G.T.R., Stratford, Ont.

Being much interested in the training of apprentices for the mechanical trade, also in the education of the younger mechanics, any papers read or discussions on the subject have always been of great interest to me, and when asked to prepare a paper on some subject, I selected this one, not perhaps so much with the idea of imparting new information, as with a view to bringing up a subject that is of great importance, requiring careful study and attention by the industrial community of Canada, and those responsible for the proper education of Canadians to-day. A glance at the title of this paper might give the impression that I favored the university educated mechanic, or mechanical engineer. I only partially approve of same, and believe that a system of combined practical and technical education should precede any such course.

In papers without number and discussions without end, it has been endeavored to try and settle the question as to whether the university educated man or the practically educated man has been the most successful in giving the best results to his employers and the mechanical world at large. Although there have been numerous university graduates who have shown great brilliancy and accomplished much, yet the practical man has not by any means been outclassed, and is probably holding more positions of high responsibility and trust to-day than his university graduate competitor. However, it is not this phase of the subject I wish to deal with, but the technical education of the average mechanic,

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and the system of education by which it can be most successfully accomplished as to thoroughness and economy of time.

In this young and growing country of ours, the rapid development of steam and electric railways, and the vast increase in manufacturing industries, have created a demand for increased and rapid facilities for doing work, and for producing mechanics able to keep pace with the development. From all appearances the future will create a still more urgent demand. To meet present and future requirements a quick and thorough system of education will be necessary to provide adequately trained men. The men at the head of our public educational system to-day have already realized this, and as a result the boys in our public schools are taught manual training. The system should be in force in every centre in the country. It would help parents and guardians by enabling them to judge of the fitness of the boy for his future profession, mechanical or otherwise. It is a great assistance to the boy who intends to enter the mechanical profession, and best of all it is teaching him to appreciate, respect, honor and have a desire for honest manual labor, an attitude of mind which will be of incalculable benefit to the individual, and will produce a beneficial effect on the country at large.

To begin with, the boy or young man who intends becoming a mechanic, or mechanical engineer, should have a partial high school education. This would insure a good ground work for his further development during his progress through the shop, and while learning his trade, in addition to his practical everyday instruction, which ought to be under the supervision of a thoroughly trained and competent instructor, his technical training should go on at the same time, and it should be just as much a part of his duties as to turn bolts, fit up a motion, etc.; in other words, the boy or young man's practical and technical training should be combined and go hand in hand until he develops into a full-fledged mechanic or mechanical engineer. To accomplish this it will be necessary that employers establish a system of technical education in connection with their works. I would urge the wisdom of our Government making liberal grants for technical education, and the necessity of making our technical schools really technical, and not so in name only. Boards of Trade, etc., might interest themselves in this matter with good effect, and we might have a splendid system of technical education which would at least approach that of the United States or Germany.

A number of corporations in the U.S. have schools in connection with their shops, and on the G.T.R. we also have a system of technical training for our apprentices, which takes them through a five years' course in mathematics, applied mechanics, mechanical drawing, and machine design, but I would add to this (what I think would make the system complete), a one year's course at the university. That is, the university should have a special one year's course for young men who are capable, after learning their trade, of passing an entrance examination, and on payment of a small fee be able to take this course. In this course they would have the privilege of making experiments, tests, etc. A young man who wished to succeed and obtain a more advanced education could do so, and could pay his way, which would be preferable. A young man who could see this opportunity before him would thus be stimulated throughout his apprenticeship and would be more diligent, attentive and ambitious. In addition to the actual information in connection with his work which he would get at the university, and which he would be able to take in more readily on account of his five years' practical and technical training, he would receive general improvement by coming in contact with men of learning and culture for a year. This would not take him so long from the practical work as would a four years' course, for after a four years' course he would find so many changes that he would require to go over a great deal of ground again.

This system should also extend to the younger journeymen mechanics, and where technical schools are not provided in the locality, or even if they are, corporations and manufacturers should provide tuition for these employes who, if capable of passing necessary entrance university examinations, could avail themselves of the one year's special course. This would be of great benefit to employer and employe as well. There would always be a number of well-educated practical men available for responsible positions, and with this course we would have our mechanic well educated, but contented with his position and work, and not feel disappointed because he had the education, and not always the position, but could be satisfied to get what was coming to him on his merits.

If we combine the practical and technical training of our boys and young men, we would have the best average mechanic who would meet all requirements of these times of rapid progress and development, and we would, I believe, solve labor problems to a great extent.

The foregoing was read at a recent meeting of the Railway and Engineering Club of Canada.

Inverness Railway and Coal Co.

Following is the report for the year ended June 30, 1906: "Your directors regret that the Company's affairs are not in a more prosperous condition. The total tonnage mined during the year was 181,959 tons, which, compared with the output of the previous year shows a decrease of 10,852 tons. Your directors in the last annual report made reference to the fact that the Intercolonial Ry. had withdrawn their patronage from the Company in the matter of a coal contract, but that negotiations were then pending looking to the renewal of the previous year's contract. After considerable delay a contract was ultimately arranged, but inasmuch as shipments under it were comparatively small until the opening of St. Lawrence navigation in May, 1906 (practically six weeks before the close of the fiscal year), the value of this contract does not to any appreciable extent appear in this report. During the progress of the negotiations with the Intercolonial Ry. the output of the colliery was limited, your directors feeling that a contract with the Government would ultimately be made and they considered it best in the interests of the Company not to enter into contracts for the disposal of the output of the mines elsewhere. Since the close of the fiscal year the returns for the five months ended Nov. 30, 1906, have been received, which show, compared with the same period of last year, an increase in net earnings of $39,035.41. This result is to some extent due to the very satisfactory increase in the sale of coal for bunker purposes and to the continued growth of sales in connection with the coasting trade. With the object of improving the coal some changes have been made in the system of mining and the method of preparing the coal for the market, and your directors are pleased to report that the result of these changes is shown in the higher regard in which the coal is held by consumers generally. Recent changes in the Nova Scotia Mines Act have made it necessary to re-survey certain of the Company's mining leases at Inverness and take out the same areas under amended descriptions. As a consequence it has been necessary to surrender the leases previously held, and a supplementary mortgage trust deed to the National Trust Co., Ltd., trustees for the bondholders, has been executed covering the same areas. Your directors ask your approval of their action in this matter. The underground workings of your mines have, as usual, been regularly inspected by the Provincial Government Inspector and are in good condition. Development work has been continued well in advance of actual mining operations. The physical condition of your railway has been fully maintained."

ASSETS.

Railway and railway equipment, mines, mining plant, development, etc.		$10,443,629.10
Sinking fund, deposited with National Trust Co. to redeem 1st mortgage bonds		23,134.95
OPERATING ASSETS—		
Colliery and railway stores on hand	$31,820.21	
Colliery accounts and agents' and conductors' balances due to company	71,836.69	
		103,656.90
Income account		153,652.85
		$10,724,073.80

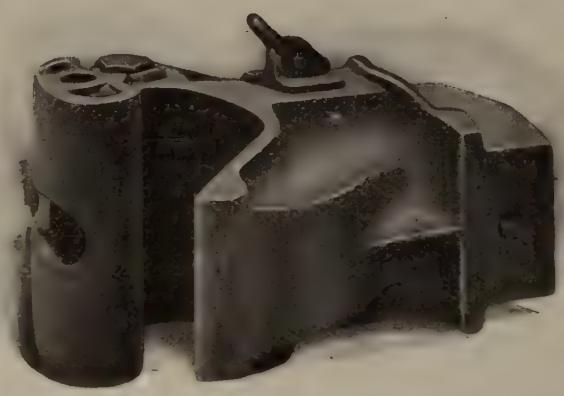
LIABILITIES.

Capital stock		$ 7,500,000.00
1st mortgage gold bonds.	$3,000,000.00	
Less held in treasury	885,000.00	
		2,115,000.00
Loans applied in developing the property, secured by treasury bonds		817,326.96
Other advances to Co.		196,039.80
Current Liabilities—		
Unpaid bills	51,779.29	
Accrued interest on bonds	43,927.75	
		95,707.04
		$10,724,073.80

The officers are: President, W. Mackenzie; Vice-President, D. D. Mann; Secretary-Treasurer, A. W. Mackenzie.

Quebec Taxation of Transportation Companies.

The resolutions passed at the recent session of the Quebec Legislature relating to the taxation of corporations provide for the following: Sleeping or parlor car companies, ¼ of 1% on the capital invested in cars used in the Province and an additional tax of $50 on every office or place of business in Montreal and Quebec, and $20 for offices or places of business in any other place. On hotels in the Province operated by railway companies on the paid-up capital employed, the tax (a) of division 1, article 1,145 of the Revised Statutes and the additional tax (b) mentioned therein. Telephone companies, upon the paid-up capital if it exceeds $300,000, $1,200; if it exceeds $500,000, $1,500; if it exceeds $1,000,000, and does not exceed $2,000,000, $2,000, and ½ of 1% on the gross earnings, but not less than $3,000 nor more than $5,000 if the capital exceeds $2,000,000. Express companies foreign to Quebec, ½ of 1% upon the gross earnings in the Province the previous calendar year, provided the tax be not less than $800. Foreign to Canada, an additional tax of ½ of 1% upon the gross earnings in the Province for the preceding year, provided the tax be not less than $400. Railway companies, for each mile of track of steam or electric railway, $30 a mile for one track, and $15 a mile for each additional track operated; $20 a mile for single track branch lines, and $10 a mile for each additional track. The company owning the line as well as the operating company will be liable for the tax, but the measurement for the mileage shall not include switches, spurs or sidings.



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To the Holders of Great Northern Railway of Canada 4% Guaranteed Bonds.

NOTICE IS HEREBY GIVEN that The Canadian Northern Quebec Railway Company, successor by amalgamation of Great Northern Railway of Canada, will, on surrender, as below mentioned, not later than April 14th, 1907, of Great Northern Railway of Canada Four Per Cent. Guaranteed Bonds, issue in exchange therefor Four Per Cent. Canadian Northern Quebec Railway Company Perpetual Debenture Stock (guaranteed both as to principal and interest by The Canadian Northern Railway Company) at the rate of £95 sterling of such Debenture Stock for each $500 of Great Northern bonds, interest to be adjusted both on stock and bonds, the said Debenture Stock to be issued in London, England.

The holders of Great Northern bonds who wish to make the exchange on the terms above mentioned may send their bonds to National Trust Company, Limited, Toronto, Canada, one of the Trustees of the Mortgage securing the said Debenture Stock, specifying in whose name or names the Debenture Stock is to be issued. Interest on the Debenture Stock is payable half-yearly on the 30th June and 31st December, and the adjustment of interest will have to be made with the National Trust Company. Upon this adjustment being made, the National Trust Company will arrange with its Co-Trustee in London, England, for the issuance of Debenture Stock in accordance with the instructions given by the holders of the Great Northern bonds. Further particulars can be obtained from the Canadian Northern Quebec Railway Company, 1 Toronto Street, Toronto, Canada.

W. H. MOORE, Secretary,
The Canadian Northern Quebec Ry. Co.

Toronto, March 14th, 1907.

Percy R. Todd, a Canadian by birth, has been elected Vice-President Bangor and Aroostook Rd.

A. W. Mackenzie, Treasurer Canadian Northern Ry., Mrs. Mackenzie and children, left Toronto Mar. 12 for Biltmore, North Carolina, and are expected to return about the middle of April.

The G.T.R. added the following rolling stock between Dec. 22, 1906, and Mar. 9: 3 parlor cars, 3 first-class cars, 5 baggage and express cars, 8 cabooses, 623 box cars, 166 flat cars, 53 ballast cars, 3 snow plows.

E. A. Williams, formerly Superintendent of Motive Power, C.P.R., who resigned his position as General Mechanical Superintendent of the Erie Rd. recently, is going to take a good long rest after 43 years' continuous railway service.

J. Leslie, who resigned his position as roadmaster G.T.R. at Ottawa, recently, has been appointed General Roadmaster Quebec, Montreal and Southern Ry. Office, Sorel, Que. He will have charge of betterments and construction works as well as maintenance of way

A. McAuley, who recently resigned his position as C.P.R. roadmaster at London, Ont., owing to a bronchial affection which rendered him unable to stand the exposure which roadmasters are subject to, is living in Toronto Junction and will probably establish himself in the grocery trade there.

J. H. Jagoe, heretofore General Southern Passenger Agent Rutland Rd., New York, has been appointed General Eastern Passenger Agent West Shore Rd., New York, succeeding his brother, H. B. Jagoe, resigned. Both brothers were born in Hamilton, Ont.

F. R. Nelson has been appointed Travelling Freight Agent for the Southern portion of the G.T.R. Middle Division, with headquarters at Hamilton. He was for a number of years chief clerk in the local freight agent's office at Hamilton, having practically started there as a junior. The local office staff gave him a gold watch and locket on his promotion.

A G.T.R. circular issued Mar. 30 over the signature of C. M. Hays, Second Vice-President and General Manager, reads: "F. H. McGuigan, Fourth Vice-President, having resigned to enter the service of another company, all officials heretofore reporting to the Fourth Vice-President, will, until further notice, report to E. H. Fitzhugh, Third Vice-President, Montreal."

Peterson & Co., Limited, was registered in England Mar. 7 with a capital of £50,000 in 2,000 preference shares of £10 each, and 30,000 ordinary shares of £1 each, for the purpose of carrying on the business of shipowners, etc. There is to be no initial public issue. The first directors are W. Peterson (permanent Managing Director), and others are to be appointed by the signatories, while the qualification is £50, and the remuneration of the Managing Director is to be £1,000 a year, and 5 per cent. of the net profits before providing for reserve or depreciation.

ELECTRIC RAILWAYS.

The Hamilton Street Railway Case

The Ontario Railway and Municipal Board has rendered its decision in the case of the complaint against the Hamilton St. Ry. Co. It is of such great importance to electric railway companies generally, that we give it fully as follows:

This application first came before the Board in the form of a petition signed by 47 of the residents of James and Herkimer streets, dated July 21, 1906, which was afterwards adopted by the Hamilton City Council, and forms part of the city's application to the Board, which was filed Sept. 1, 1906. The petition from the citizens alleges that owing to the noise and vibration caused by the dilapidated condition of the cars, roadbed and general equipment used by the street railway company, those of the public residing on the streets in proximity to the company's lines of railway are subject to constant and serious annoyance and are thereby prejudiced in the enjoyment of their homes. The city's application charges that the tracks are in a bad and worn-out condition over practically the whole system; that the rails are flattened and worn at the joints; that the pressure of the car wheels upon the rails is uneven and the lip of the rails is in many places worn off; that the tracks and roadbed are badly constructed and ballasted, allowing the rails to spread and causing such vibration of the rails as to render it practically impossible to maintain the adjacent pavement. That the cars operated by the company are in many instances dilapidated and in bad repair, and the general upkeep of the cars is unsatisfactory. That many of the cars are entirely unfit for the service, the fastenings, bolts and loose parts of the cars being in such a condition as to cause a maximum amount of noise. That the working parts of the cars are badly worn. That the car wheels are wider than the rails. That the system of brakes is inadequate to the service.

The application was made under section 63 of the Ontario Railway and Municipal Board Act, 1906, which provides that where it is alleged by a municipal corporation having jurisdiction over a highway along which a railway is operated in whole or in part, under an agreement between such municipalities and the company operating the railway, that the company has violated or committed a breach of such agreement, the Board shall hear all matters relating to such alleged violation or breach of agreement, and shall make such order as to the same as to the Board may seem reasonable and expedient, and in such order the Board may in its discretion direct the company or the municipality to do such things as are necessary for the proper fulfilment of such agreement or to refrain from doing such acts as constitute a violation or breach thereof.

Section 164 of the Ontario Railway Act has not been invoked by the applicants, nor could it be successfully, for the reason that it has not been established that the railway is dangerous to the public using the same. The rights of the parties, therefore, depend upon the agreement between the city and the company. The agreement is contained in by-law 624 of the city of Hamilton, passed Mar. 26, 1892, which was accepted by the company by an agreement under seal bearing the same date, and in a by-law of the city passed April 30, 1906, which was not assented to by the company.

Nothing is said in by-law 624 as to the repair of rails, curves and switches; no standard of maintenance of tracks has been fixed by the by-law. The horse car idea seems to have been prevalent and uppermost in the mind of the draftsman of the by-law, because great care is taken to provide for the repair and maintenance of the street surface, but nothing is specifically said as to the repair of the rails, switches, curves or special work of the railway. The only reference to repairs is contained in sec. 21 of by-law 624, which is as follows: "It is hereby reserved for the said city council to make such further rules, regulations, orders and by-laws in relation to the construction, repairs and operation of the said railway as from time to time may be deemed necessary to protect the interests of the said city, or to provide for the safety, welfare, or accommodation of the public; but that no alteration in these rules shall be made which shall have the effect of impairing the substantial rights of said company."

In pursuance of this section the city council on April 30, 1906, passed a by-law enacting as follows: "The Hamilton Street Railway is hereby required to put into good repair without delay all the tracks of this railway in the city of Hamilton, and repair and make good all the pavement and roadways which have been injured by the company's cars upon the defective tracks of the railway within the city."

Section 21 of by-law 624, and the by-law passed in pursuance thereof on April 30, 1906, constitute the only agreement before the Board under which the Board is asked to compel the company to repair the tracks, switches, curves or special work of the railway. The agreement as to the cars is contained in section 14 of by-law 624, which reads as follows: "The said company shall place and continue on said railway good cars with all modern improvements for the convenience and comfort of passengers, including lighting and heating, and it shall run cars thereon as the public convenience may require, under such directions as the city council may from time to time prescribe, and no permanent business signs shall be carried on the outside of the cars for advertising purposes."

The by-law passed by the city on April 30, 1906, does not touch the question of the repair of cars. No other by-law providing for the repair of the cars has been brought to the attention of the Board. The cars now being operated by the company, the repair of which is complained of, in al-

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most every instance are the same cars that were placed on the railway when it was originally equipped, in pursuance of sec. 14 of by-law 624. No doubt they were good cars when put on the railway, and had all modern improvements for the convenience and comfort of the passengers, including lighting and heating, otherwise the city would not have permitted them to have been put in commission. They are the same cars, but they want repairs. They are old fashioned, but they will be good with repair for a number of years.

It is clear to the Board that upon the evidence that not only the tracks, switches, curves and special work of the railway, but the cars are in need of repairs. The question as to whether or not the city has the right to compel the company to repair the cars is somewhat troublesome. The Board, however, is more concerned with conditions and with the convenience and the comfort of the people than with technicalities and fine-spun questions of law, and therefore holds as a matter of law that sec. 14 and 21 of by-law 624, and the by-law of April 30, 1906, constitute an agreement not only for the repair of the tracks of the railway which includes the switches, curves and special work, but also the cars. If the Board is wrong in this view, the Court of Appeal will have to put it right. Standard of repair not having been expressly specified in the agreement, the repair must be reasonable under all circumstances. Repair is a relative term. The Board thinks it is right, when fixing the character of repairs of this railway and its cars, in keeping in view the cases which have arisen under the Municipal Act for non-repair of highways, and that the same principle which has been acted upon in these cases are applicable in this case. A great deal of evidence has been given as to the state of the non-repair of the tracks and cars. The electric plant of the company from which it gets its motive power is stated by all the witnesses to be first class. The overhead work is good. The difficulty is with the railway tracks and cars.

The Board, in pursuance of the request contained in the first petition, authorized Wyse & Middlemist, consulting electrical and railway engineers, to make a careful examination of the whole system. The results of their labors are embodied in their report to the Board, copies of which have been furnished to the applicants and respondents. No attack has been made by either party on the substantial accuracy of Wyse & Middlemist's report, which has been of great assistance to the Board in directing their attention to the sworn testimony as to non-repairs and to what was necessary to put the system in good and sufficient repair. The Board have in the former formal judgment set forth the repairs and the character of the same which, according to the evidence, they considered necessary, reasonable and expedient to the tracks and cars.

The Board regret to say that after the repairs ordered by the Board to the system have been made, the system will not be what the city of Hamilton really requires. The fact is, the city has outgrown the system. After all the repairs which are ordered have been made, the cars will still be antiquated and the system inadequate for the requirements of the city. What the interests of the city demands, and what the people want and should have, is a new, modern, up-to-date street railway system, with additional track extensions. No contract or law exists which would enable the Board to order and direct the company to provide a modern system with the necessary additional track.

Neither in the application or the evidence at the trial was any question raised as to the sufficiency of the fenders. These can be made the subject of a special order if necessary.

The city in laying pipe on the street where the company had double tracks cut off the ends of the ties, so that one side of the tracks tilted down to such an extent that the cars could not pass. This was spoken of by some of the witnesses as an act of vandalism, and perfectly unnecessary in order to enable the city to lay pipe. The Board cannot find any warrant in the agreement for thus destroying the company's property. The formal order of the Board provides that the city shall make good the damage that has been done.

It appearing from the evidence that the Radial Railway Co., in pursuance of an arrangement with the city, is in the early spring to relay King St. east from Catharine St. to Sanford ave. with new rails and special work, the Board have made no order for the repair of that portion of King St., but reserves further order in case such should be necessary.

In reference to the costs the Board has concluded to make no order except as to Wyse & Middlemist's fees, charges and expenses for the examination of and report upon the system, which amount to $759.06, and which the Board thinks it reasonable, should be borne in equal shares by both parties. The services of these engineers were asked for by the petitioners, whose petition was assumed by the corporation. In any event their report was rendered necessary by the want of particularity in the application. It was not set out in detail what portion of the tracks and cars were out of repair, nor what repairs were necessary and reasonable. Their report enabled both parties, as well as the Board, to direct the evidence to the parts of the tracks and cars out of repair and to the remedy. Under these circumstances the Board does not consider it fair that the company should be made liable for more than one-half of Wyse & Middlemist's charges. The Board directs the company to provide $40 for law stamps for the formal order.

The Board being of the opinion that they had no power either under the agreement with the city, or as a matter of law, to order the company to provide a new, modern, first-class, up-to-date railway system, with the track extensions necessary for the requirement of a city of Hamilton's size and importance, the Board thought it well to delay handing out their formal order, and the reasons for the same, until it had an opportunity of meeting the council of the city of Hamilton for the purpose of arranging a conference between the city and the company, with a view of securing by negotiations, a new street railway system with additional tracks. Having received a communication from the city clerk advising the Board that the council does not deem it expedient to confer with the company, the Board now hands out its formal order and the reason therefor.

The order dated Jan. 28 directs as follows: "The respondents to take up and replace all worn or split rails mentioned and set forth in Wyse & Middlemist's report and replace the same by new rails. All loose joints shall be tightened and all low joints in the rails mentioned in Wyse & Middlemist's report shall be repaired with a suitable fish-plate, which will not depend on the shear of the bolts, but which will act as a girder to support the joint and be made to pass under the foot of the rail on each side, and be joggled sufficiently to raise the lowest worn portion of the railhead to grade level or top of the high rail, the whole top to be ground even. All parts of the track mentioned in Wyse & Middlemist's report as not being to gauge, shall be made true to gauge, and all curves with angular joints shall be made true arcs and circles, or if transition curves, true spirals to the same. The track work on the bridge over the G.T.R. on Barton Street shall be repaired and proper vertical curves made. All the above named track repairs not already made shall be made and completed within six months from April 1, 1907, unless otherwise ordered.

All car wheels, known as flat wheels, or wheels which have got out of ground, shall be forthwith removed and replaced by good and sufficient wheels. The trucks, motors and brakes of the cars shall be put in good and sufficient state of repair and trucks shall be repainted. The bodies of the cars mentioned in Wyse & Middlemist's report, not already repaired in manner herein set forth, shall be properly overhauled, repaired, upholstered (where upholstering has formerly been used), repainted and varnished, and the same shall hereafter be kept clean inside and out. The repairs for the trucks, motors, brakes and for the bodies of the cars shall be made within three months from the date hereof, unless otherwise ordered. All cars not now all heated by electricity shall be provided with good and sufficient electric heaters, not later than Oct. 1, 1907. The rope side guards on cars when being repaired shall be replaced by wooden side strips one inch by three.

All special work described in Wyse & Middlemist's report as worn and in need of repair, which has not been replaced since the date of their report, shall be replaced within one year from the date hereof. All street crossings, and all toothings, which are now above the level of the top of the rails, shall be made level with the rail top, and all streets where tracks are laid, but crowns of which are low, shall be crowned up and repaired by the city and the company, in accordance with the provisions of by-law 624 of the city of Hamilton. All ties cut off by the servants or workmen of the city corporation, or by their contractors, in laying pipe on that portion of the streets occupied by the company's tracks, shall be replaced by the corporation, and the tracks raised up where they have sunk from insufficient refilling of the earth, the whole to be made by the corporation as good as it was previous to the disturbance of the company's tracks.

The corporation of the city of Hamilton shall forthwith pay to Wyse & Middlemist $379.53, being one-half of their account for services, and the Hamilton St. Ry. Co. shall forthwith pay to Wyse & Middlemist the other half of their account, and to the Board $40 for law stamps for this order, and otherwise the Board make no order as to costs, and the Board reserve further order and directions herein.

Immigrant Rates to Vancouver.—The C.P.R. has arranged for a rate of 1 1-5c. a mile from Liverpool, Eng., to Vancouver, B.C., for the purpose of promoting settlement in that province. Reference was made to this matter in the Lieutenant-Governor's speech at the opening of the Legislature. G. W. Bosworth, Fourth Vice-President C.P.R., said: "We did not reduce our rates with the slightest idea of running foul of U.S. roads. British Columbia wanted immigrants, and we decided to give a rate which would offer every inducement for settlers to go there. We informed the other railways interested just what we proposed to do, and they fully understand the situation. It is a big reduction, of course, in the immigrant rate, and it will mean that U.S. lines must reduce rates to Puget Sound ports, but they have known that long ago, and there should be no misunderstanding or rate war." The old rates were $80.75 by the Empress steamers and $79.50 by the company's other steamers, the new rates being $68 and $66.75 respectively.

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Galt, Preston and Hespeler Street Ry.

This company, which also owns and operates the Preston and Berlin Railway, is double-tracking its line between Galt and Preston, Ont., installing a 750 h.p. addition to its power plant at Preston, and adding to its rolling stock a 35-ton electric locomotive and four suburban cars to replace the rolling stock destroyed by fire Dec. 3 last. The cars will be 55 ft. long with a smoking room compartment 10 ft. 7 ins. The passenger and smoking compartments will be furnished with 24 reversible and 8 stationary automatic seats with tilting cushions. The foot rests underneath the seats are moveable, so that when the seat back is moved it allows the foot rest at the back to drop to accommodate the passenger sitting immediately in the rear. Polished bronze grab handles are on the aisle-end top corner of each seat back. The interior finish will be polished mahogany inlaid with white holly and ebony. The design is of the most modern character, presenting a smooth surface, highly polished and having none of the unsanitary features so frequently found in cars of this description, all raised mouldings and projections being eliminated as far as possible, commensurate with appearance. There will be a basket rack over each seat. The door between the passenger and smoking compartments will have spring hinges and patent door checks. The ceiling will be "Semi-Empire," painted a delicate green. The deck sash will be glazed with green opalescent glass; the transom, which extends over the length of the two lower sashes, will be glazed with blue opalescent glass, particular attention being paid to the harmonization of colors and shades. The waist panel, or that part of the wall from the window sill to the floor, will be covered with painted burlap. In the upholstering of the seats in bronze green, special attention is being made to have them sanitary and yet attractive in appearance. The ventilator sashes are equipped with a sash opener, by which the conductor can ventilate the car in a few minutes without any draft on the passengers, giving a free circulation of pure air in the upper part, thus eliminating all danger of drafts. The lower sashes are designed so that the more vibration there is, the tighter they become, being fitted in the top with O. M. Edwards Co.'s spring compression rollers, and at the bottom with special bevelled locks, which force the sash frame against the framework of the car, making it practically air-tight and effectually preventing all rattling. The vestibules at each end are 5 ft. long, and equipped with automatic folding doors. As it is now against the Ontario Railway Act to allow any passenger to ride with a motorman, the cars are equipped with a motorman's cab, the door of which is so arranged that it can be folded back against the end of the car, effectually shutting in the controller and brake equipment. The motorman's seat in the tail end of the car can be used for a passenger when necessary. In one end will be located a tastefully designed incased cabinet, in which all the switches will be located. The exterior will be painted Pullman color, trimmed with gold. Possibly the greatest attention of all has been paid to the underframing work. The side sills are composed of ⅜ x 18 in. steel plate reinforced with wood, and extending the full length of the car body. This is also over-trussed and under-trussed with a combination of angle steel and wrought iron, eliminating all danger of deflection of the car body. The centre sills are also composed of continuous steel plates, extending from end to end of vestibules, blocked with wood. The intermediate sills are further strengthened by 6 x 4 in. steel angle, extending backwards a sufficient distance under the car to prevent any drooping at the points of the vestibules. Immediately under the bulkhead at each end of the car is placed a 6 x 4 in. steel angle, extending from side to side of the body. This angle iron is intended to transmit the strain borne by the over-truss, and prevents any sagging in the centre of the car. The needle beams are made of 6 in. I beams, fitted on the ends with malleable iron struts, conveying the weight to the under-truss rods. From the belt rail to the top of the sill, the car is blocked solidly with white-wood blocking, this making the side in one solid frame. The system of bracing used in the side framing is what is technically termed W bracing. Each car is equipped with a pilot at each end and radiating drawbars. At diagonal corners, steps are provided, having three risers, bringing the lower step quite close to the ground. All the glass, with the exception of the opalescent, is to be polished British plate, ¼ in. thick. The trimmings are to be solid bronze, highly polished. The curtains or window shades will be morocco embossed back, mounted on O. M. Edwards Co.'s tin spring shade rollers, and fitted with roller tip, pinch handle curtain fixtures. An electric signal bell system is to be provided with a push button at each seat. Instead of having the usual incandescent lamps with their continual alternating dimming and brilliancy, so hard on passengers' eyes, four interior arc lamps will be used. In heating every provision is made to keep passengers comfortable. An electric heater is provided under each seat and one in the motorman's cab. Fire extinguishers will be placed in each vestibule, and each car will be equipped with an arc headlight. Storm sashes will also be a feature. They will be put on in such a way in the winter that they will not in the least detract from the appearance of the car. The Westinghouse automatic air brakes will be installed on each car, as well as an auxiliary hand brake. The electrical equipment consists of 4 Westinghouse 93-A-60 h.p. motors, speeded at 45 miles an hour. These cars are also having a complete multiple unit switch control equipment.

Projects, Construction and Betterments.

British Columbia Electric Ry.—Location surveys have been completed from Eburne, on the Vancouver and Lulu Island Ry., to New Westminster, B.C., and it is intended to have the line constructed this season. The V. and L.I. Ry. is owned by the C.P.R., which will construct this branch of 9.5 miles. The branch will be electrified and operated by the B.C.E. Ry., as is the V. and L.I. Ry.

Surveys are being made in the vicinity of Victoria by a party under W. Meredith and H. Burwell. T. T. Goward, local manager at Victoria, stated that a general survey of the district was being made. Local reports state that the object of the survey is to secure additional water powers. (Feb., pg. 111.)

Fort William, Ont.—The clause in the bill before the Ontario Legislature authorizing the Town Council to construct and operate a street railway, was rejected by the private bills committee Feb. 27. An endeavor is being made to secure a reconsideration. At a meeting held in Fort William Feb. 28, a resolution was passed recommending the council to use every reasonable effort to acquire its portion of the street railway, and that meanwhile the council enter into negotiations with the Mount McKay and Kakabeka Falls Ry. The resolution also sets out that there be embodied in the agreement certain terms "that will protect the town in the control of its streets, and also embodying terms that will withdraw the agreement with the company if, prior to the beginning of the work, Port Arthur finally consents to grant Fort William its end of the railway, and that C. W. Jarvis and J. T. Horne be appointed to act with the council."

The by-law which the taxpayers had passed prior to the application to Parliament for power to construct an electric railway, set out that the projected line was to be seven miles long. It would traverse the principal streets of the town, and power was to be purchased from the Kaministikwia Power Co. The estimated cost of construction was $82,000, which it was proposed to raise by the issue of debentures. (Mar., pg. 189, and Jan., pg. 45.)

Galt, Preston and Hespeler Ry.—Preston and Berlin Ry.—The betterments projected on these lines during the current year include the double-tracking of the line between Preston and Galt, Ont., and the installation of additional machinery in the power building.

Hamilton Street Ry.—It is reported that the line will practically be reconstructed, new cars put on and other improvements made. W. C. Hawkins, General Manager, told a committee of the City Council, Mar. 12, that the company did not intend to buy new cars, nor to lay new tracks all over the city at present. It is asking the city for permission to make the strip of roadway between its tracks 5 ft. wide instead of 4 ft. as it is at present.

Innisfail to Mayton.—Negotiations are in progress for the construction of an electric railway from Innisfail easterly to Mayton, and the Ghost Pine coal mines, Alta.

London Street Ry.—An addition to the power plant on Thames St., London, Ont., is to be constructed early in the spring. The cost of the addition and its equipment is estimated at $50,000. (Jan., pg. 45.)

Moncton, N.B.—An electric railway engineer from Boston, Mass., and some U.S. capitalists visited Moncton, N.B., Mar. 14, and looked over the ground. It is understood that a proposal will shortly be submitted to the local authorities for a franchise. G. B. Willett, Moncton, is looking after the interests of the promoters locally. (Feb., pg. 113.)

Quebec Ry., Light and Power Co.—Application is being made to the Board of Railway Commissioners for approval of plans of a branch line to the projected pulp mill on the Ste. Anne River, St. Joachim, Que. (Jan., pg. 45.)

St. Joseph and Stratford Radial Ry.—The application of the company for power to

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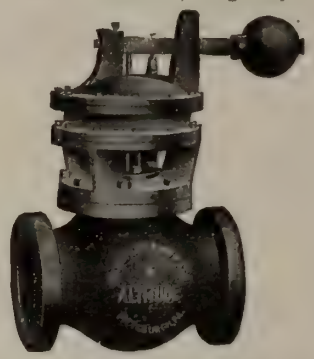

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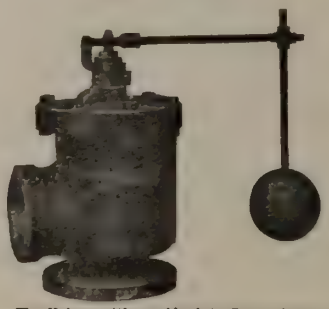

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construct various lines connecting St. Joseph and Stratford, Ont., as well as various other points, has been refused at the current session of the Dominion Parliament. The bill was opposed by the Ontario Government, on the ground that it was entirely a local line, and was not such as necessitated a Dominion charter.

Application is being made at the current session of the Ontario Legislature, in consequence of the rejection of the company's application by the Senate at Ottawa, for an act incorporating a company with power to construct the lines previously mentioned. The notice is signed by J. U. Vincent, J. M. Lavoie, A. A. Taillon, Ottawa. (Feb., pg. 113.)

Strathcona Radial Tramway Co.—The North-West Territories Assembly in 1901 passed an ordinance authorizing the construction of a tramway system in Strathcona, Alta. Application is being made at the current session of the Alberta Legislature granting an extension of time for the construction of the line, and otherwise amending the powers of the company. Jno. Walter is one of the promoters.

Toronto and York Radial Ry.—The extension from Newmarket to Jackson's Point, Ont., is being completed and the regular passenger and freight service is expected to be started May 1. The extension is 24 miles long, the whole line from Toronto to Jackson's Point being 54 miles long. Surveys are being made for a branch from Mulock's Corners to Bradford, via Holland Landing, about five miles. (Mar., pg. 191.)

Toronto Suburban Ry.—It is said that surveys are being made from Lambton Mills to Brantford, Ont., and that the proposed extension to Brampton may be built from Lambton Mills, instead of from Weston.

Windsor and Tecumseh Electric Ry.—The taxpayers of Walkerville, Ont., by a vote of 113 to 60, have extended for a year the time within which the projected line is to be constructed. The line is being constructed by the Sandwich, Windsor and Amherstburg Ry. Co., which recently acquired the charter. (Feb., pg. 113.)

Windsor and Tecumseh Ry.—It is expected to have 10 miles of track completed by July 1.

Electric Ry. Finance, Meetings, Etc.

Berlin and Waterloo Street Ry.—The railway committee of the Ontario Legislature has approved of the bill authorizing the Berlin Town Council to pay $75,200 into court, and assume the property and franchise of the company. W. D. McPherson, on behalf of the company, stated that it cost $90,000 to change the equipment on the adoption of electricity as a motive power in 1896, and since then the line had not paid 3% a year. The question whether the amount of the award, $75,200, is a fair price for the line is before the courts, upon an appeal by the company.

British Columbia Electric Ry.—Subscriptions have been received in London for £300,000 4¼% perpetual consolidated debenture stock at 98. The stock is irredeemable, and is entitled to the benefits of a trust deed dated Feb. 23, 1907, in favor of the British Empire Trust Co., whereby the whole of the company's assets and undertaking, including its uncalled capital, are charged by way of first floating charge, subject to the existing mortgages and charges created to secure £238,000 first mortgage debentures and £220,000 Vancouver Power debentures now outstanding. The trust provides that the total amount of debenture stock shall be limited to the amount of share capital of the company for the time being issued and paid up; that no mortgage or charge shall be created ranking in priority to or pari passu with it; that so long as any of the first mortgage debentures or the Vancouver power debentures remain outstanding, an amount of debenture stock exceeding the amount of all the first mortgage debentures and Vancouver power debentures for the time being outstanding, shall be retained unissued. When the debentures at present outstanding have been redeemed, the stock will form one consolidated first floating charge on the whole assets of the company. The interest is payable half-yearly—Mar. 31 and Sept. 30—a full half-year's interest is to be paid Sept. 30 next. The proceeds of the issue are required for the general purposes of the company to meet the necessities of the constantly increasing business, and more particularly in connection with increasing the capacity of the hydraulic plant at Lake Buntzen, and with the construction and equipment of further railways radiating from and supplementing the company's existing systems.

Cape Breton Electric Co.—Arrangements are being made for the listing of the company's stock at Halifax, N.S. A dividend of 6% has been declared on the preference stock and a statement has been made that the earnings will warrant a dividend of 4% on the common stock.

Dominion Power and Transmission Co.—Following are the officers and directors elected at the organization meeting: President, Lieut.-Col. J. M. Gibson; Vice-Presidents, J. Dixon, J. Knox; Secretary and General Manager, W. C. Hawkins; Treasurer, J. R. Moodie; other directors, J. W. Sutherland, S. O. Greening; A. Cooke, Chicago, Ill.; W. Coffin, Boston, Mass. With the exception of the two last named, all the officers and directors reside in Hamilton. The company has been licensed under the Ontario Act respecting extra-provincial companies.

Halifax Electric Tramway Co.—Railway earnings for Feb., $10,912.08, against $10,232.94 for Feb., 1906.

London Street Ry.—Representatives of the finance committee of the London, Ont., City Council met H. A. Everett, President L.S. Ry., Mar. 22, for the purpose of discussing the purchase by the city of the street railway lines and franchises.

Montreal Street Ry.—Passenger earnings for Feb., $238,250.89; total earnings, $243,467.94, against $211,827.83 passenger and $213,416.28 gross for Feb., 1906. Operating expenses, $182,275.08; rent leased lines, $339.96; city percentage on earnings, $12,600.14; interest on bonds and loans, $11,379,92; contingent for renewals, $12,173.40, against no rent leased lines; $11,198.92 city percentage on earnings; $14,254.43 interest on bonds and loans; and $10,670.81 contingent for renewals for Feb., 1906. Surplus for Feb., $24,699.44, against $21,252.69 for Feb., 1906. Gross earnings for four months ended Feb. 28, $1,300,801.47; net earnings, $439,264.70; surplus, $243,597.92, against $1,158,056.59 gross earnings; $398,842.62 net earnings and $259,880.61 surplus for same period, 1905-06.

Montreal Terminal Ry.—Following are the officers and directors for the current year: President, P. Galibert; Vice-President, F. L. Wanklyn; other directors: R. Forget, J. G. Ross, C. H. Catelli, C. S. Campbell, C. Archer.

Toronto Ry.—Car earnings for Mar., $233,860.52, against $210,531.55 for Mar., 1906.

The Sandwich, Windsor and Amherstburg Ry. Co.'s annual meeting was held at Windsor, Ont., Mar. 20. Following are the officers and directors for the current year: President, J. C. Hutchins, Detroit, Mich.; Vice-President, F. W. Brooks, Detroit; Secretary, A. E. Peters, Detroit; Treasurer, J. Bampton, Detroit; other directors, H. A. Everett, E. W. Moore, Cleveland, Ohio; A. Pack, Pontiac, Mich.; H. B. Van Courtland, New York; General Manager, J. Anderson, Windsor. This company is a part of the Detroit United Ry. System.

The Windsor and Tecumseh Ry. Co.'s annual meeting was held at Windsor, Ont., Mar. 20. Following are the officers and directors for the current year: President, F. W. Brooks; Vice-President and Manager, J. Anderson; Secretary, A. E. Peters; Treasurer, J. Bampton; other directors, J. C. Hutchins. All are residents of Detroit, Mich., except J. Anderson, who is at Windsor. The company is a portion of the Detroit United Ry. System.

Electric Railway Notes.

The Toronto Ry. has completed six cars for an electric railway in Mexico.

The London Street Ry. has received two car bodies and is adding the trucks and electric equipment.

C. M. Wilson, heretofore Traffic Manager Toronto and York Radial Ry., has been appointed Assistant Manager, and is succeeded as Traffic Manager by F. Livingstone.

The York Township Council has passed a resolution asking the Ontario Railway and Municipal Board to direct the Toronto Suburban Ry. to equip and maintain its line in accordance with its agreement with the township.

J. S. Clark, of Galt, Ont., ex-President Grand Valley Ry., was awarded $100 dammages at the Brantford Assizes, Mar. 15, in his action against a Mr. Gollidge, of Paris, Ont., for malicious and false arrest in connection with some financial transactions.

W. Newman, formerly city engineer, Windsor, Ont., and A. J. Nelles, are suing the Windsor, Essex and Lake Shore Rapid Ry. Co., for specific performance of an agreement. It is claimed that the company agreed to turn over $100,000 of its stock for the transfer of the franchise and charter held by Newman and Nelles.

The railway committee of the Ontario Legislature has struck out of the Port Arthur bill a section authorizing the operation of its street railway on Sundays. The question, however, will be further discussed in the Legislature, as the Town Council has been operating the railway on Sundays for the past two years.

W. K. McNaught, Toronto, has been appointed a member of the Ontario Government Hydro-Electric Commission, succeeding C. B. Smith, resigned. The other members of the commission are: Hon. A. Beck, London, and Hon. J. S. Hendrie, Hamilton.

The Ellison Mill and Elevator Co. is asking for tenders for a $75,000 elevator at Lethbridge, Alta.

The bill which W. F. Maclean brought before the House of Commons for the purpose of authorizing the sale of unused portions of railway tickets was defeated in the Railway Committee, Mar. 5, by a vote of 36 to 6.

The general principles of the Railway Act, which is under consideration at the current session of the Alberta Legislature, follow the Railway Act of Canada, 1903. An important feature of the Act is the provision made for the acquisition of any road under provincial jurisdiction by the province, the valuation to be by arbitration. The third arbitrator is to be appointed by the Chief Justice, in case the parties fail to agree. The time limit for construction is two years for the first 30 miles, one year for each succeeding 30 miles, the whole to be completed within five years.

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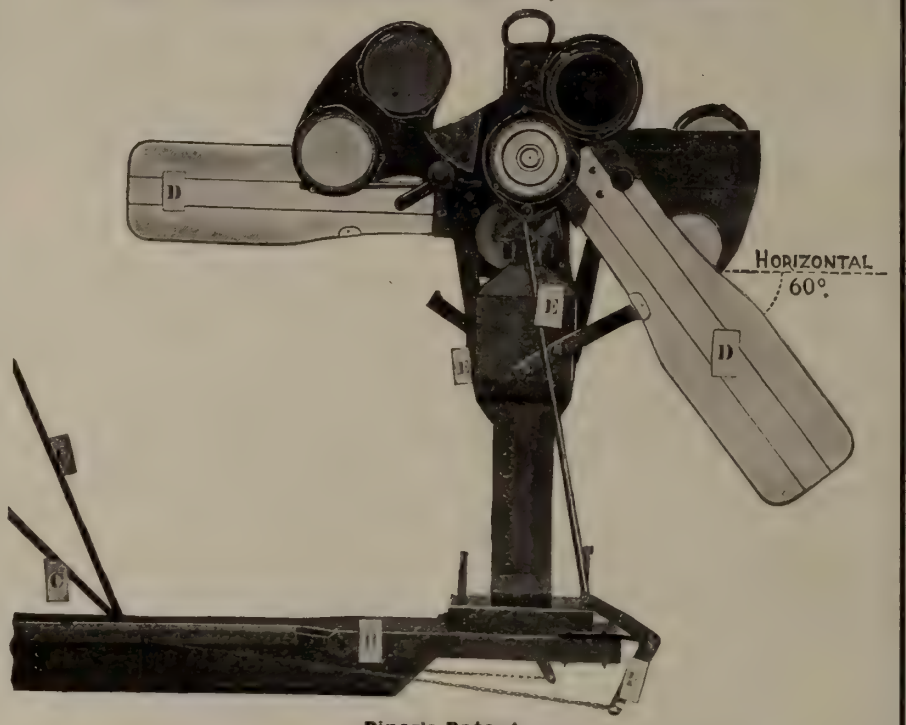

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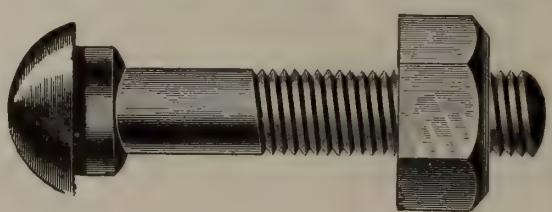

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To the underwriter
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BOSTON, MASS.

ELECTRIC RAILWAY STATISTICS FOR YEAR ENDED JUNE 30, 1906.

The following abbreviations are used in the names of railways:—E., electric, E. R., electric railway; E. S. R., electric street railway Ry., railway; S. R., street railway. The minus mark(—) in the column for net earnings shows that there was a deficit in the operations of the line to the extent of the figures given. The numbers in brackets—thus (1)—after the name of a railway refers to notes below.

Name of Railway	Mil'ge	Gross Earnings	Net Earnings	Proportion of earnings to working expenses	Earnings per train mile	Operating per car mile	Freight Mileage	Car Mileage	Loco-motive Mileage	Passengers Carried	Freight Carried
				p.c.	cts.	cts.					Tons
Berlin and Waterloo S. R. (1)	5.52	$ 30,370.78	$ 5,340.86	121	0.28	0.23	.....	109,200	.....	691,106	.....
Brantford S. R.	7.00	28,982.92	2,979.81	113	0.36	0.32	.....	80,400	.....	511,154	.....
British Columbia E. R. (2)	69.00	698,305.47	247,787.12	156	0.25	0.16	78,290	2,727,867	.....	12,395,582	23,387
Cape Breton E. Co.	12.73	87,994.43	32,802.17	158	0.27	0.17	.....	324,243	.....	1,538,341	.....
Cornwall S. R.	6.00	23,416.47	2,271.86	110	0.12	0.11	.....	188,493	6,938	314,657	.....
Egerton Tramway Co.	7.96	38,103.51	12,975.63	152	0.28	0.18	2,093	135,576	.....	836,307	.....
Galt, Preston & Hespeler S.R. (3)	16.00	91,090.71	28,559.19	145	0.42	0.29	17,393	216,924	.....	597,865	73,326
Grand Valley Ry. (4)	23.25	42,161.54	5,169.99	137	0.30	0.21	.....	141,596	.....	257,296	.....
Guelph Radial Ry.	6.00	30,032.90	9,412.33	137	0.15	0.11	2,500	181,964	.....	631,861	12,585
Halifax E. Tramway Co. (5)	12.13	152,034.42	22,044.99	117	0.21	0.18	.....	700,004	.....	3,403,747	.....
Hamilton and Dundas S. R. (6)	7.25	41,612.59	22,497.09	213	0.44	0.20	.....	93,413	.....	395,845	1,600
Hamilton, Grimsby & Beam. E. R.	22.00	80,551.51	21,015.92	140	0.28	0.20	38,276	288,276	.....	454,128	7,285
Hamilton Radial E. R.	24.50	91,880.12	42,672.24	186	0.31	0.16	.....	299,522	.....	923,879	3,720
Hamilton S. R. (7)	22.00	266,661.53	98,343.16	154	0.17	0.11	.....	1,519,816	.....	6,746,361	.....
Hull E. Co. (8)	14.50	81,229.35	6,465.34	108	0.15	0.14	17,865	525,485	11,651	918,850	24,706
International Transit Co.	3.30	42,024.37	9,051.84	127	0.14	0.11	.....	291,476	.....	1,022,014	.....
Kingston, Ports. & Cataraqui E. R.	8.00	27,554.98	—2,660.04	85	0.10	0.12	.....	187,200	.....	735,469	.....
Levis County Ry.	10.25	52,828.60	4,489.45	117	0.14	0.13	.....	376,158	.....	1,344,557	.....
London S. R. (9)	33.25	198,861.44	52,434.23	136	0.15	0.11	.....	1,262,252	.....	5,294,553	1,776
Montreal Park & Island Ry. (10)	37.99	207,311.16	59,624.28	138	0.25	0.18	6,600	813,636	.....	2,585,423	20,906
Montreal S. R (11)	67.10	2,977,267.44	1,218,660.64	166	0.20	0.12	.....	14,062,722	.....	73,555,156	.....
Montreal Terminal Ry. (12)	19.28	88,535.92	5,237.82	105	0.15	0.14	17,250	593,607	.....	908,288	74,956
Nelson Tramway Co. (13)	3.00	5,334.00	—6,230.81	46	0.13	0.28	.....	41,280	.....	101,019	.....
Niagara Falls Park and River Ry.	11.85	154,322.70	69,360.96	181	0.40	0.22	13,725	382,651	13,725	1,403,318	68,625
Niagara, St. Catharines & Tor. Ry.	19.94	140,744.06	49,132.04	153	0.29	0.19	243,621	483,207	243,621	881,171	95,271
Niagara Falls, Wesley Pk. & Cl. Ry. (14)	4.50	34,791.42	19,902.69	234	0.20	0.08	.....	170,498	.....	774,742	.....
Oshawa Ry.	8.02	58,510.77	17,134.14	141	1.28	0.90	14,557	45,695	14,557	14,723	84,981
Ottawa E. R. (15)	22.87	490,637.67	210,416.04	180	0.18	0.10	.....	2,810,020	.....	10,741,808	.....
Peterborough Radial Ry. (16)	6.00	29,700.84	5,723.32	124	0.11	0.09	.....	265,485	.....	639,777	.....
Port Arthur S. R. (17)	9.00	51,984.44	19,682.62	160	0.25	0.15	.....	208,389	.....	1,079,250	.....
Pt. Dalhousie, St.C. & Thor. E. S. R.	8.17	20,805.39	9,240.63	180	0.15	0.08	.....	131,267	.....	401,675	.....
Quebec Ry. Light & Power Co. (18)..											
Citadel Division	17.22	214,460.66	66,463.84	145	0.17	0.12	.....	1,220,254	.....	5,054,223	.....
Montmorency Division	25.00	119,487.46	44,822.67	160	0.51	0.32	.....	235,247	235,247	994,874	.....
Sandwich, Windsor & Amherst. Ry.	25.18	121,999.91	55,241.35	182	0.22	0.12	.....	532,850	.....	2,053,960	.....
Sarnia S. R. (19)	7.00	36,653.75	6,118.92	120	0.27	0.22	.....	133,476	.....	533,217	.....
Sherbrooke S. R.	7.00	28,000.00	11,015.00	156	0.11	0.07	.....	246,000	.....	1,000,000	.....
Southwestern Traction Co. (20)	20.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. John Ry.	13.50	120,242.52	25,669.91	127	0.18	0.14	.....	674,003	.....	2,688,989	.....
St. Stephen S. R.	3.00	29,099.40	398.89	101	0.15	0.15	.....	183,960	.....	601,686	.....
St. Thomas S. R.	7.50	18,795.83	2,535.98	112	.....	.....	.....	394,200	.....	535,301	.....
Sydney & Glace Bay Ry.	18.80	113,129.08	51 461.15	183	0.35	0.19	26,164	322,159	26,164	2,256,348	.....
Toronto Ry. (21)	48.65	2,915,412.19	1,338,644.51	181	0.21	0.11	.....	13,485,150	.....	71,944,316	.....
Toronto Suburban Ry.	9.06	30,807.82	3,836.51	114	0.17	0.15	.....	176,987	.....	668,206	.....
Toronto & York Radial Ry. (22)	37.97	191,881.89	74,277.29	163	0.24	0.15	50,151	781,609	.....	2,384,364	12,900
Winnipeg E. R.	32.00	627,127.05	297,733.17	190	0.26	0.14	.....	2,365,974	.....	14,155,360	.....
Woodstock, Thames Val. & Ing. E.R.	11.50	21,824.13	9,967.39	184	0.18	0.10	.....	118,645	.....	378,312	.....
Yarmouth S. R.	2.00	12,306.73	2,101.14	121	0.14	0.11	.....	90,000	.....	203,118	.....
	813.74	$10,966,871.97	$4,291,834.33	.....	.....	.....	528,465	50,618,836	551,903	237,655,074	506,024

Laurie Jarvis Limited

Notes to Electric Railway Statistics.

(1) The Berlin and Waterloo S. R. mileage includes the leased line, Berlin and Bridgeport Ry., 2.40 miles.

(2) The British Columbia Electric Ry. operates lines in Victoria, Vancouver and New Westminster, and operates the Vancouver and Lulu Island Ry., under an agreement with the C.P.R. It has eight miles of double track lines.

(3) The Galt, Preston and Hespeler Ry. operates under lease the Preston and Berlin E.R., 7.25 miles.

(4) The Grand Valley Ry. leases its power from the Brantford Street Ry.

(5) The Halifax Tramway Co. has 1.58 miles of double track.

(6) The Hamilton and Dundas Ry. receives its power from the Hamilton Cataract Light, Power and Traction Co.

(7) The Hamilton Street Ry. purchases its power from the Hamilton Cataract Light, Power and Traction Co. It has 10.50 miles of double track lines.

(8) The Hull Electric Ry. has 10.00 miles of double track lines.

(9) The London Street Ry. has 6.90 miles of double track line.

(10) The Montreal Park and Island Ry. has 12.75 miles of double track.

(11) The Montreal Street Ry. has 52.81 miles of double track line.

(12) The Montreal Terminal Ry. has 4.00 miles of double track.

(13) The Nelson Tramway Co. purchases its power.

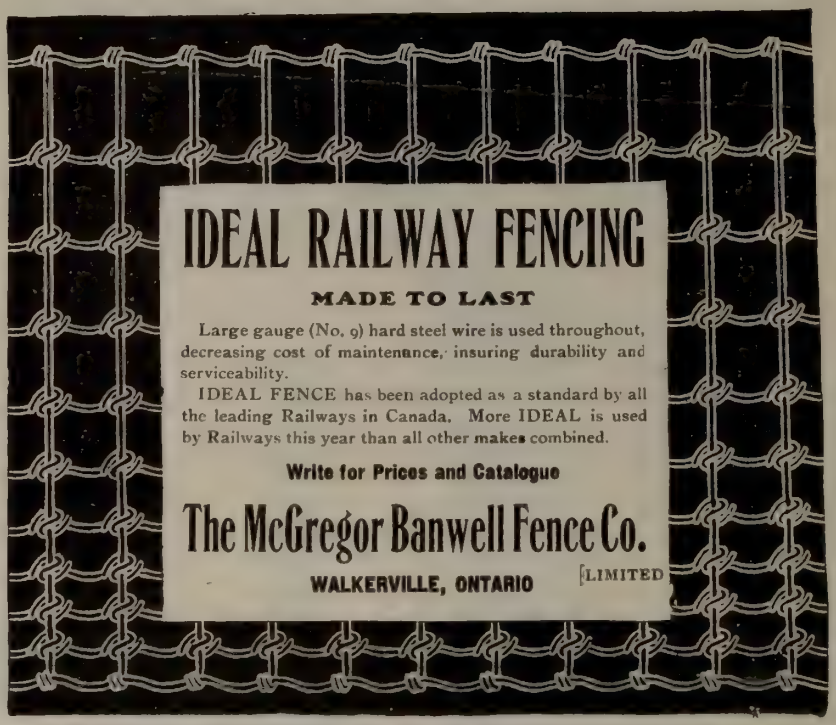
(14) The Niagara Falls, Wesley Park and Clifton Ry. hires its power. It has 11.42 miles of double track.

(15) The Ottawa Electric Ry. has 17.95 miles of double track

(16) The Peterborough Radial Ry. purchases its power.

(17) The Port Arthur Street Ry. is owned and operated by the Town Council.

(18) The Quebec Ry., Light and Power Co. has 5 miles of double track on its Citadel



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Coal	B.T.U. per lb. combustible	Ash per cent.	Moisture per cent.
Anthracite	14,700	10 to 20	1 to 5
Semi-anthracite	14,900	10 to 20	1 to 5
Semi-bituminous	15,800	5 to 10	1 to 6
Bituminous—Eastern	15,000	5 to 20	2 to 6
" Western	14,200	8 to 25	6 to 15
Lignitæ	12,200	5 to 20	10 to 30

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Division and 6.00 miles on its Montmorency Division.

(19) The Sarnia Street Ry. purchases its power.

(20) The South-Western Traction Co.'s line only commenced operation in the latter part of June, 1906.

(21) The Toronto Ry. has 47.67 miles of double track.

(22) The Toronto and York Radial Ry. includes the Metropolitan Ry., the Toronto and Mimico Ry., and the Toronto and Scarboro E.R. Freight is handled on the Metropolitan Division. The T. and Y.R.R. is owned by the Toronto Ry.

Grain Elevator Notes.

The stock of grain in the elevators at Port Arthur and Fort William, Ont., Mar. 1, was reported to be over 4,000,000 bush.

The Oxbow Farmers' Elevator and Trading Co., with offices at Oxbow, Sask., has been incorporated under the Northwest Territories' Ordinance relating to companies.

The Canadian Consolidated Flour Mills Co. is an amalgamation of 17 milling firms in Manitoba and Saskatchewan. It has a capital of $2,000,000; its mills have a combined capacity of 3,000 barrels a day, and its elevators a combined capacity of 1,500,000 bush. It is proposed to construct a large warehouse at Winnipeg.

The Saskatchewan Grain Growers' Convention passed a resolution Feb. 22, expressing an opinion that the problem of marketing the wheat crop of Western Canada can best be solved by Government control of all terminal elevators, and the establishment of a system of internal elevators, the whole to be operated by a commission to be appointed by the Government, the Railway Commission and the grain growers of the Province, the whole cost to be borne by the grain trade.

MARINE DEPARTMENT

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM FEB. 12. 1907, TO MAR. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
B. L. Cockell..	94,720	U.S.A., 1884	Screw, 6 N.H.P.....	65.8	13.2	5.7	24	16	Port Stanley, Ont....	F. Jackman, Toronto, Ont.
Blue Bell.....	124,849	Toronto, Ont., 1906.....	Paddle, 48 "	150.0	30.0	7.2	752	451	Toronto, Ont.....	Toronto Ferry Co., Toronto, Ont.
Brulot.....	122,253	Salmon Lake, Que., 1903...	" 1½ "	32.0	10.5	3.5	8	6	Quebec, Que.....	G. J. Paradis, Salmon Lake, Que.
Dick.....	122,254	Montmagny, Que., 1906....	" 8 "	71.4	16.0	4.4	42	27	" "	Price Bros. & Co. (Ltd.), Quebec, Que.
Invicta.....	122,168	Vancouver, B.C., 1904.....	Screw, ½ "	26.0	8.0	3.0	8	5	Vancouver, B.C.....	T. J. Cook, Vancouver, B.C.
Marguerite...	117,176	Windsor, Ont., 1906.....	" 10 "	23.0	6.9	2.9	4	3	Windsor, Ont.....	J. Parent, Windsor, Ont.
Nettie B.....	121,951	Port Stanley, Ont., 1906.	" 4½ "	37.7	11.8	4.3	12	9	Port Stanley, Ont....	W. Berry, Port Stanley, Ont.
Nidge.....	122,169	Vancouver, B.C., 1906.....	" 16 "	63.7	14.3	7.0	58	39	Vancouver, B.C.....	Ross & Howard Iron Works Co., Vancouver, B.C.
Nora J.....	122,147	Yarmouth, N.S., 1907.....	" 8 "	54.0	12.4	5.0	19	13	Yarmouth, N.S.....	J. C. McGray, Cape Island, N.S.
St. Etienne...	122,252	Grand Baie, Que., 1906....	" 16 "	57.6	15.2	5.6	33	23	Quebec Que.....	Murray Bay Lumber and Pulp Co., St. Etienne de la Mal Baie, Que.
Shamrock....	121,846	Kingston, Ont., 1903..	" 1 "	34.0	7.4	3.0	6	4	Toronto, Ont.....	R. H. Johnson, Port Carling, Ont.
Spartan.....	122,170	.....	" 1 "	33.0	9.0	2.4	8	6	Vancouver, B.C.....	H. E. Dussenburg, Vancouver, B.C.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM FEB. 12, 1907, TO MAR. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Antiope.....	55,014	Port Glasgow, Scotl'd. 1866	Barque	242.3	38.4	23.7	1,496	1,380	Victoria, B.C.....	P. J. R. Mathieson, Ladysmith, B.C
E. E .Whidden .	122,025	Liverpool, N.S., 1907	Schr.	118.4	31.3	10.9	241	199	Liverpool, N.S.....	D. C. Mulhall, Liverpool, N.S.
Mary Bell.....	122,181	Martinoque, N. S., 1906...	"	49 0	16.8	7.0	38	38	Arichat, N.S.....	L. A. LeBlanc, West Arichat, N.S.

Montreal-Fort William Freight Service.

The Montreal and Lake Superior Line, which heretofore operated six steamers, viz.: Ames, Plummer and Pellatt, of the Canadian Lake and Ocean Navigation Co.; Wacondah and Neepawah, owned by the R. O. and A. B. Mackay interests, Hamilton, and the Fairgrieve str. Arabian, under the joint management of F. Plummer, A. B. Mackay and J. B. Fairgrieve, has been dissolved.

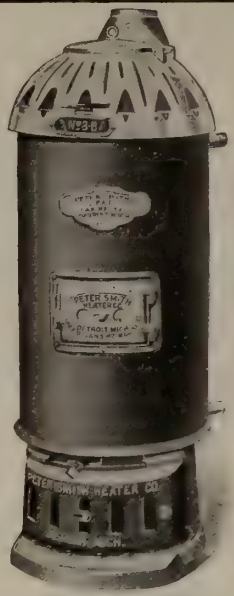
The Canadian Lake Line has been formed to commence operations on the opening of navigation. The fleet will be composed of the Canadian Lake and Ocean Navigation Co.'s steamers Ames, Pellatt and Plummer; Capt. J. B. Fairgrieve's steamship Arabian, and three steel package freight steamships, the Morena, Corunna and Nevada, which have been purchased in Great Britain by C. H. F. Plummer. These recently acquired vessels, which were built in 1890, are each 1,249 tons gross, 768 net register, classed 100 A1; length, 232 ft.; breadth, 34 ft.; depth, 18¾ ft. moulded, cubic capacity, 84,950 cubic ft., carrying 1,378 tons dead weight, inclusive of 150 tons in bunkers, on 13 ft. draft, steaming 10 knots on a consumption of 11 tons of coal a day. They are lofty between decks, have three hatchways, fitted with triple engines, h.p. nominal 99, cylinders 17½, 26½, 44 ins. diameter; 30 in. stroke, one tubular boiler, working pressure 160 lbs.; water ballast in double bottom, and peaks; three steam winches, steam steering gear, one deck steel, and complete awning deck. The Canadian Lake Line, with its seven steamships, will give a regular semi-weekly service between Montreal, Prescott, Kingston, Toronto, Hamilton, Cleveland, Windsor, Walkerville, Sarnia, Courtright, Sault Ste. Marie, Port Arthur and Fort William. It will be under the general management of F. Plummer, Toronto, with the following staff: Traffic Manager, H. Young, Toronto; general agent, J. Brown, Montreal; soliciting freight agent, Montreal, J. Nelligan; agent, Toronto, W. H. Hickey; agent, Hamilton, Ont., E. Jordan; agent, Cleveland, Ohio, C. C. Phillpott; agent, Sault Ste. Marie, Ont., G. A. Boyd; general agent, Port Arthur and Fort William, J. J. O'Connor; with sub-agents at each of the twin ports; general agent, Winnipeg, J. McLerie. The Michigan Central Rd. agent will represent the line at Courtright, Ont.; the Wabash Rd. agent at Windsor, Ont., and the Pere Marquette Rd. agent, at Sarnia, Ont.

Another line will also give a semi-weekly service between Montreal and Fort William, the fleet comprising the Mackay steamships Wacondah and Neepawah, the Montreal and Great Lakes S.S. Co.'s S.S. Bickerdike, the Montreal Transportation Co.'s S.S. Advance, the Matthews S.S. Co.'s S.S. Haddington and Edmonton, and the S.S. Rosedale, which has been bought from the St. Lawrence and Chicago Steam Navigation Co. by a syndicate of Montreal, Toronto and Hamilton people, including R. O. and A. B. Mackay. These vessels will be operated as the Merchants and Montreal-Lake Superior Line, the intermediate ports of call being Toronto, Hamilton, Cleveland, Windsor, Walkerville, Courtright, Sarnia, Sault Ste. Marie and Port Arthur. G. E. Jaques & Co., Montreal, have been appointed general eastern agents, and will have charge of Montreal and Toronto traffic, G. Sommerville being General Agent at Toronto, and T. Burke, Soliciting Freight Agent. R. O. and A. B. Mackay, Hamilton, Ont., will be General Western Agents in charge of Hamilton district, southern Ontario, lines of Wabash, Michigan Central and Pere Marquette Railways, and Detroit and St. Clair River ports. H. W. Cowan, formerly with the old Montreal and Lake Superior Line, will be engaged with R. O. and A. B. Mackay.

Capt. C. E. Kingsmill, son of the late Judge Kingsmill, Toronto, has been severely reprimanded for negligence in connection with the stranding of H.M.S. Dominion in Chaleur Bay, Aug. 18, 1906, while on a visit to Canada.

The Minister of Marine, replying to a question in the House of Commons recently, stated that vessels belonging to Italy, Germany, Sweden, Norway, Austria-Hungary, Denmark, Belgium and the Argentine Republic, were entitled to be admitted to coasting privileges in Canada, under Imperial treaties.

The Royal Marine Insurance Co.'s report for 1906, presented at the annual meeting in Montreal, Feb. 27, showed a very satisfactory year's business. Dividends of 8% have been paid annually since the company was organized, and a large reserve fund has been built up. The retiring directors were re-elected.



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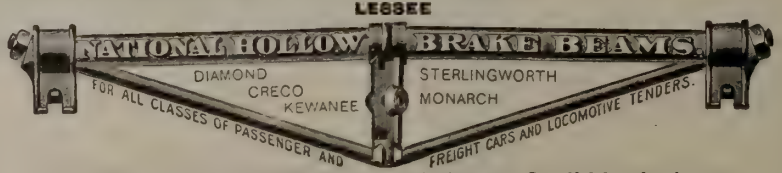

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The Collingwood Dry Dock.

The Public Accounts Committee of the House of Commons is investigating the cost of the construction of the Collingwood dry dock, toward which the Dominion is contributing a subsidy at the rate of 3% a year on $500,000 for 20 years. The dry dock was taken over from the town, which gave a bonus of $50,000 towards its enlargement. The enlarged dock was valued at $550,000, but this was subsequently reduced to $350,000. Thos. Long said that up to the time of the valuation by the Public Works officials there had been expended upon the dock $350,000 in actual cash, but this included the value of the old dock and the land. The ledger showed that in 1904 the total expenditure on the new dock had been $704,000, and during the 18 months following an additional $100,000 had been expended. L. Coste, who made the valuation in 1904 for the Public Works Department, valued the property at $540,000, and had no hesitation in recommending the payment of a subsidy on $500,000. He admitted making the plans for the dock whilst he was in the Government employ, and held 20 shares in the company, paying therefor $2,000 out of the $2,500 due him for the preparation of the plans. H. S. Osler, K.C., made a statement of the stock affairs of the dry dock from the time that the old company was merged into the new one, which went to show that when the capital was increased to $1,000,000, the stock interests of the old shareholders amounting to $100,000 while their property, etc., was written up to $550,000, but subsequently reduced by agreement to $350,000. In addition to this $300,000 cash went into the new enterprise. The committee directed the production of various accounts, vouchers, etc.

Atlantic and Pacific Ocean Marine.

E. Hartnell, formerly connected with the Allan Line at Montreal, died recently at Bootle, Eng., where he had lived for some years.

The New Zealand Government has decided to use the Suez Canal route for its regular mail services, and to send supplemental mails via Vancouver, B.C.

The Thomson Line S.S. Fremona, while on the run from the Tyne, Eng., to Spezzia, to load fruit for Montreal, was badly damaged in a collision in the North Sea, Mar. 1.

The Imperial Parliament has now before it the first of the bills asking for authority to construct railways in Ireland in connection with the projected fast line of steamers between Blacksod Bay, Ireland, and Halifax, N.S.

The C.P.R. S.S. Empress of Ireland arrived in Liverpool, Eng., from Halifax, N.S., Mar. 2, having made the trip in 6d. 1h. 45m., or 3h. 15m. less than the Empress of Britain had previously done, thus establishing a new record.

Some surprise is felt that Canada has not been invited to send a representative to a conference called by the Colonial Secretary in London, Eng., during April, to consider the international aspect of recent or projected legislation relating to merchant shipping.

C. McLean, of McLean, Kennedy & Co., shipbrokers and agents, Montreal, died there Mar. 2. He represented the Head Line, of Belfast, Ireland, and other steamship interests, and was a member of the executive council of the Shipping Federation of Canada.

Giving evidence before the Royal Commission on shipping rings, A. Soper, a South African trader, said that a system of deferred rebates was now operating on all steam lines trading from the United Kingdom, Germany and Scandinavia, but not on the lines from Canada and the U.S.

F. Daniells, Assistant Superintendent Dominion Line, fell into the hold of the S.S. Southwark, at Portland, Me., Mar. 15, and died in a few minutes from the injuries received. He was a resident of Montreal, but went to Portland during the winter season of navigation.

The Quebec Transport Co.'s directors have held several meetings at Quebec recently, to discuss the business done and the prospects for the future. No official statement has been made, but it is stated in Quebec that the Canadian Northern Ry. interests are likely to take over the entire concern.

The Allan Line S.S. Victorian, sailing April 27, will be the last mail steamer to sail for Liverpool from Halifax this season. It is expected that when the St. Lawrence River is opened in May, the mail steamers will be enabled to call at Father Point and not at Rimouski, Que., as in previous seasons.

The Elder-Dempster Co. propose to replace the S.S. Dahomey on the run to Mexican ports with the S.S. Bornu, a sister ship to the Sokoto. The Sokoto got ashore at Louisbourg, N.S., Mar. 8, during a gale, but was towed off without damage, and reached Halifax Mar. 11, to complete loading for Mexico.

Sir Daniel Dixon, Bart., M.P. for North Belfast, died at his residence, Holywood, near Belfast, Ireland, Mar. 9, aged 63 He was head of the firm of Thomas Dixon & Sons, managing owners of the Lord Line of steamers, some of which trade to Canada, and owners of a number of vessels engaged in the lumber trade sailing between Miramichi, N.B., and Belfast.

A general change round of the commanders of the steamers of the Furness Line, trading to the Maritime Provinces, is reported, caused by the transfer of Capt. Healy, of the Evangeline, to the company's service at Newport, Eng. The other officers reported to be changed include Capt Scott, of the Sicily; Capt. Fearneaux, of the London City; and Chief Officer Hector, of the Ulunda.

A press despatch from Great Britain states that an order has been placed by the Canadian Pacific Steam Navigation Co., with John Brown & Co., Clydebank, Glasgow, Scotland, for two 5,000 ton steamers for its service between Glasgow, Liverpool, Havre and North American ports. It has been reported that the C.P.R. was desirous of putting on a line of steamers to Glasgow, and that the Donaldson Line might be acquired. We are not aware of any such concern as the Canadian Pacific Steam Navigation Co., and the C.P.R. Steamship Department advised us Mar. 23 that it knew nothing about the order said to have been given to Jno. Brown & Co.

The Canadian-Mexican Pacific Steamship Co. will operate the Georgia and the Lonsdale in the regular service under the subsidy contract with the Canadian and Mexican Governments. The first sailings were made in March, and a considerable business done. Owing to the cargo offering at and for other ports outside those mentioned in the contract, the company is arranging to put on a third steamer which is expected from England during the summer. Capt. Worsnop is General Manager of the company, and J. H. Greer is General Agent at Victoria, B.C. A company is being organized in Victoria to build a wharf for the exclusive use of the steamers of this line.

The Newfoundland Legislature is being asked to approve of a contract to establish a fast line of steamers between a port on the island and a port on the west coast of Ireland. The Newfoundland port is Green Bay, and the Irish port is Killery, a port which will have to be developed. It is also proposed to run 20 knot steamers between Port Aux Basques, Nfld., and Gaspe, Que., during the summer, and Sydney in the winter. The project is to take definite shape within two years or the liability of the colony will cease. The proposal is to pay a subsidy of $75,000 a year for 25 years. Messrs. Ochs, London, Eng., and Paris, France, are the proposed contractors. The Liverpool Daily Post speaking of the proposal says: "It is another of the wild-cat schemes to which we have been treated of late."

The Imperial Privy Council, London, Eng., gave judgment, Feb. 28, in the appeal in the Parisian-Albano collision, off Halifax, N.S., in Mar., 1905. The Allan Line S.S. Parisian and the German freight S.S. Albano collided, and the Parisian received such injuries that she sank at her wharf. Suit was brought by the Allan line and tried by the local judge in Admiralty, assisted by the late Capt. Tinling, R.N., as nautical assessor. The nautical assessor was favorable to the Albano on essential points; the judge in Admiralty did not agree with him, and gave judgment in the Parisian's favor without assigning particular reasons. Appeal was taken to the Supreme Court of Canada. Judgment was given, the majority of the court sustaining the decision of the judge in Admiralty. The judgment of the Privy Council sets aside both judgments and decrees of the Supreme Court and of the local judge in Admiralty, there being cross-suits in the case, declares in both suits that the Parisian alone was to blame for the collision, and dismisses the action against the Albano with costs in the courts below, and pronounces in favor of the Albano's claim in the cross-action against the Parisian and her freight and bail therefor in an amount to be found due in the usual way by reference. The Parisian is also directed to pay the costs.

Press despatches state that soon after Sir Thos. G. Shaughnessy, President C.P.R., reaches England, an official announcement will be made respecting the company's plans for ocean steamship construction. The despatches state that two of the present Empress liners on the Pacific will be transferred to the Australia-New Zealand run; that the Empress of Britain and Empress of Ireland will be transferred from the Atlantic to the Pacific Ocean, and will run between Vancouver and Hong Kong; and that orders will be placed for two larger steamers of the Empress type for the trans-Atlantic service. In this connection it may be mentioned that the Oceanic Steamship Co., operating steamers from San Francisco to Australia, has withdrawn from the service and has arranged to send its passengers via Vancouver, B.C., on steamers of the Union Steamship line, operated in connection with the C.P.R. The publication Mar. 14 of the extension contract between the Imperial Government and the C.P.R., for the conveyance of the mails to and from Hong Kong, is another point of interest in this connection. The contract provides for the completion of the journey from port to port during the summer in 708 hours, and in winter in 732 hours. Except between Vancouver and Hong Kong three-quarters of the crew must be British. The Treasury in a memorandum state that they assent with some hesitation to the use of the route, for the postal traffic has hitherto been comparatively small, and they do not regard with favor the granting of subsidies on commercial grounds. However, in view of certain important modifications, they approve of the arrangement as a purely temporary measure.

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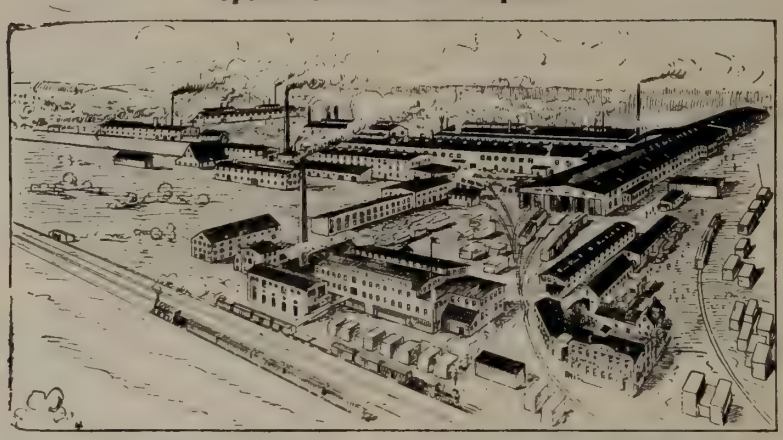

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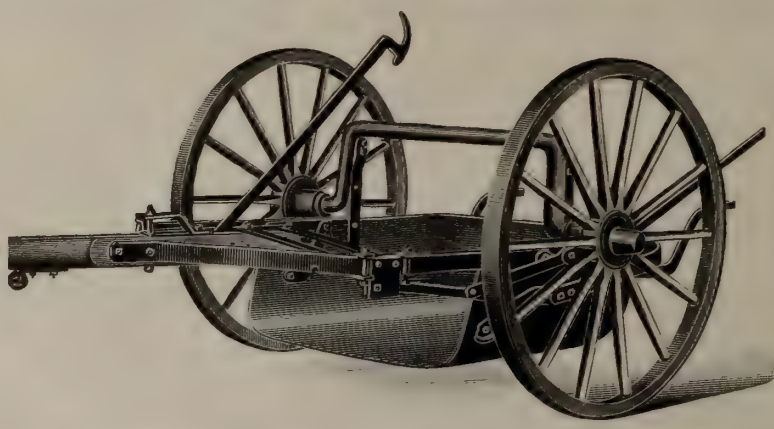

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DOMINION LINE
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Montreal—Quebec—Liverpool
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LEYLAND LINE
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Sailing from Boston Wednesdays.

RED STAR LINE
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Calling at Dover for London and Paris.
Sailing from New York Saturdays.

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Arr. Lowell	*7.29	p.m.,	*6.37	a.m.
" Worcester	†9.04	"	*9.13	"
" Boston	*8.15	"	*7.30	"

VIA G.T.RY., AND WHITE RIVER JCT.

Lv. Montreal	*9.01	a.m.,	*8.40	p.m.
Arr. Lowell	*6.11	p.m.,	*7.17	a.m.
" Worcester	†9.04	"	*9.13	"
" Boston	*6.55	"	*8.05	"

VIA G.T.RY., WEST SHORE & ROTTERDAM

Lv. Toronto			*12.01	p.m.
" Niagara Falls			*3.31	"
" Buffalo	*4.30	a.m.,	*7.20	"
Arr. North Adams	*1.08	p.m.	*5.11	a.m.
" Worcester	*4.55	"	*9.59	"
" Boston	*5.20	"	*9 50	"

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Maritime Provinces and Newfoundland.

J. T. Jean, Arichat, N.S., has been appointed receiver of wrecks for Richmond County, N.S.

The hailing port of the schooner Robert Ewing has been changed from Parrsboro, N.S., to Barbados, West Indies.

C. R. Northup, for many years a shipbuilder and shipowner at Falmouth, N.S., died at Canning, N.S., Feb. 22, aged 86.

Capt. W. Dickson, J. W. Townsend and M. Pope, jr., have been appointed members of the pilotage authority for Louisburg, N.S.

The Avon Marine Insurance Co., at a meeting of shareholders held at Windsor, N.S., Mar. 12, decided to go out of business.

An act incorporating the Margaretville Steamship Co. has been passed by the New Brunswick Legislature at its current session.

Capt. A. B. Barbeaux, formerly a well-known Bay of Fundy shipowner, and latterly a shipbrokerin New York, died there, Feb. 24, aged 79.

The Red Cross Line str. Rosalind, trading between Halifax, N.S., and New York, is being given a general overhaul at Newcastle-on-Tyne, Eng.

The Inverness Ry. and Coal Co. is reported to have purchased the steam tug Minto, formerly in service at the Imperial dock yard, Halifax, N.S. An official of the company advised us Mar. 22 that he was not aware of such a purchase.

The United Fruit Co. is reported to be completing arrangements to extend the run of one of its lines of steamers so as to include a call at Halifax, N.S.

Capt. F. S. Mabee has been appointed to the command of the People's Line Steamship Co.'s str. Crystal Stream, on the Washademoak route for the season of 1907.

The Halifax and Canso Steamship Co. has chartered the str. Bridgewater to replace the burned str. Strathcona on the Halifax-Guysboro route until a new steamer is built.

Capt. H. R. Robertson, who died recently at Portland, Ore., was a native of Pictou county, N.S. He became famous as the builder of seagoing log rafts, the first being built at Joggins, N.S.

The Nova Scotian Supreme Court has refused to grant a consent order to the Attorney-General of the Province to prefer an indictment against D. McLean, of North Sydney, N.S., on a charge of stealing $4,700 from the pilot funds.

A company is being organised at Rothesay, N.B., for the purpose of purchasing a ferry steamer to operate on the Kennebecasis River at Gondola Point. E. S. Carter, O. and A. Webmore, Gondola Point, are the principal men interested.

The following appointments have been made: C. Dixon, harbormaster at Marie Joseph, N.S.; J. Matheson, harbormaster Summerside, P.E.I.; S. M. Griffin, wharfinger Drumhead, N.S.; B. Doucette, wharfinger St. Mary's, N.S.

The Nova Scotia three-masted schooner Beaver left Walton, N.S., Jan. 3 for Boston, Mass., but did not reach her destination until Feb. 16, owing to bad weather. The schooner was towed into Boston from Gloucester in a leaking condition.

The underwriters received tenders to Mar. 30 for the floating and delivery in dry dock at Halifax, N.S., of the str. Turret Bell, stranded at Cable Head, P.E.I. The Turret Bell was engaged in the coal carrying trade for the Inverness Ry. and Coal Co.

A meeting of the Deer Lake Steamship Co. was held at St. Johns, Nfld., recently, when A. J. Harvey, liquidator, laid before the shareholders an account of the manner in which the winding up of the company had been conducted, and the property of the company had been disposed of.

A delegation from St. John, N.B., had a lengthened interview with the Minister of Railways and Canals, Feb. 22, respecting the proposal that the harbor should be nationalized. On the Minister's suggestion a committee of five has been appointed to put the proposals in a concrete form for submission to the Government.

C. W. Anderson, Sherbrooke, N.S., and James Hemlow, Jr., Liscomb, have been appointed members of the pilotage authority for the district of St. Mary's, and Liscomb, N.S.; D. Champoux, Campbellton, N.B., member of the pilotage authority for Restigouche, N.B. Capt. R. Keay, a member of the pilotage authority for Charlotte County, N.B.

A press despatch states that G. Spence, a New Brunswick man, is having a steamer built for the winter trade between P.E.I. and the mainland. The steamer, it is proposed, will run from Bedeque Bay, P.E.I., to Salt Grass or Amos Point on the mainland. W. Ramsay, Bedeque, P.E.I., is understood to be acting as agent for Mr. Spence in the matter.

The Shepody Navigation Co.'s officers and directors for the current year are: President, Senator McSweeney; Vice-President, Hon. C. W. Robinson; other directors: Hon. H. R. McLellan, J. H. Harris, F. W. Sumner, J. W. Y. Smith, W. H. Edgett. The question of the purchase of an additional steamer was left over for further consideration, but it was decided to have the str. Wilfrid C. given a thorough overhaul before the opening of navigation. This was decided at a meeting held at Moncton, N.B., recently

The Halifax and Sheet Harbor Steamship Co. has placed the new str. Margaret on a route between Halifax and Sheet Harbor, N.S., calling at Jeddore, Owl's Head, Ship Harbor, Tangier and Spry Bay. The steamer started on her first trip Mar. 6, and will give a weekly service. The Margaret is a wooden steamer, the hull being sheathed with galvanized iron, and her engines are capable of making 11 knots an hour. There is sleeping accommodation for 30 passengers, and also capacity for a cargo of 1,500 barrels. J. S. Chisholm, Halifax, N.S., is managing director.

The str. Stanley arrived in Georgetown, P.E.I., Mar. 4, having been a week out from Pictou, N.S. She had over 100 passengers on board, and had received considerable damage owing to the ice. The Minto had also been stuck in the ice off Caribou since Feb. 26, and was still there Mar. 11. The Stanley left Georgetown, Mar. 11, and got stuck in the ice outside the harbor. It was intended, Sir Wilfrid Laurier said, in the House of Commons, Feb. 26, to provide larger and more powerful steamers than the Stanley and Minto to carry on the winter service between Prince Edward Island and the mainland.

Province of Quebec Marine.

E. H. Duval, shipbroker, Quebec, died in Levis, Que., recently, aged 75.

B. Langlois has been appointed harbormaster, and F. X. Gagnon, wharfinger, at Port Daniel, Que.

Jas. Forbes, a retired pilot, who had seen many years' service on the Lower St. Lawrence, died at Matane, Que., Mar. 7, aged 89.

N. A. Perrault, one of the oldest of the St. Lawrence pilots, and latterly President of the Association of Pilots, Montreal, has retired from active serivce.

Capt. E. Doran, for many years engaged in the shipping and towing business at Quebec, and latterly master of the schooner Rutherford for the Department of Public Works, died at Quebec, Mar. 10.

Capt. St. Onge, who retired from the Richelieu and Ontario Navigation Co.'s service, about 10 years ago, after 37 years' service, died at Montreal, Mar. 10, aged 69.

Capt. J. Temple, formerly commanding vessels trading between Quebec and South America, and latterly engaged as a nautical assessor, died in Quebec, Feb. 28, aged 65.

G. W. Stephens, chairman of the Montreal Harbor Commissioners, has announced that he will resign his seat in the Quebec Legislature at an early date, in order to devote the whole of his time to the duties of the Commission.

The Dominion Coal Co. has installed coal discharging plants at Three Rivers, Que., and St. John, N.B., which it is expected will result in effecting a substantial reduction in the cost of unloading coal from the company's steamers at these points.

The proposal to construct a dry dock at Montreal, which the Harbor Commissioners have under consideration, is generally approved. An opinion has been expressed that the dock should be 1,000 ft. long, and divided into two sections, so that it may be utilized for large or small vessels.

The Richelieu and Ontario Navigation Co., we have been advised, has not placed an order for the steamer to be named Rapids Queen, and the new steamer to be operated between Hamilton and Montreal. It is hoped, however, to have both steamers ready for the opening of navigation of 1908.

The Ogdensburg Coal and Towing Co., and the owners of the str. Nicaragua, are being sued in the Quebec Admiralty Court by the Canada Atlantic Ry., for damages caused by the steamer running into the railway company's bridge across the Soulanges canal at Coteau Landing, Que., Sept. 12, 1905, causing a suspension of traffic over the bridge for two days.

The Minister of Marine, replying to a question in the House of Commons, Mar. 11, said 48 pilots performed ocean steamship service between Montreal and Quebec, and there was no intention of reducing the number. The age limit was 65 years, but on passing an examination for eyesight and hearing at regular intervals, men might be kept on until they were 70.

The Magdalen Islands Development Co., Ltd., is having 17 motor boats built to replace the oldtime fishing smacks operated from the islands. Steamers will run from the islands to Pictou, N.S., and other points, to market the catch, and to do a general trading business. It is proposed to make three round trips weekly. The company also owns the str. Amherst.

Following are the officers and directors of the North Shore Transportation and Wreckage Co., Ltd., elected Mar. 13: President, T. Gagnon; Vice-President, P. Galibert; other directors: U. H. Dandurand, A. Gagnon, P. Desforges, A. Fafard, O. Bernier, N. Sauriol; Secretary-Treasurer, Jos. Cote; Superintendent, J. B. D. Legare; Auditor, A. Cinq-Mars.

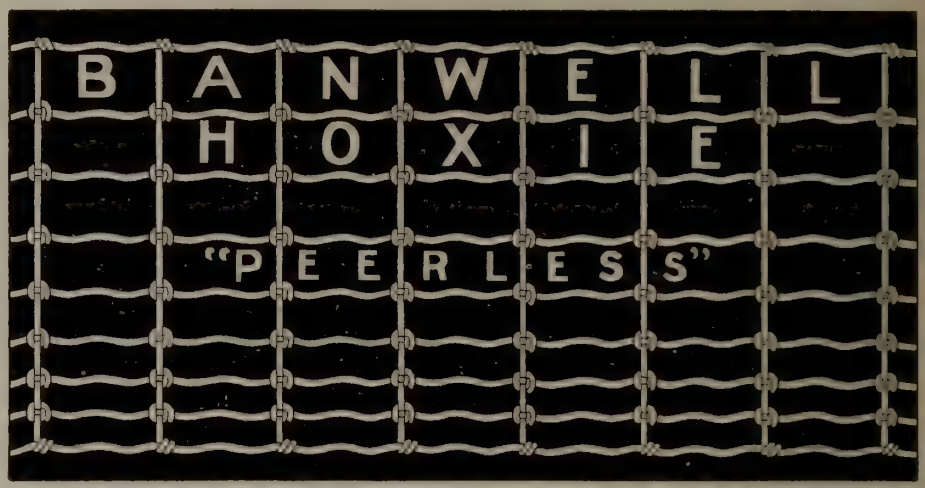
The str. Montcalm arrived at Quebec, Feb. 20, on her return trip from Seven Islands, having made the round trip in six days. The river was practically free of ice on the return journey at English Bay and Godbout, so that she was able to call there. Capt. Belanger says that there never was so much ice in the river, and in places it was very thick.

The Kaine & Bird Transportation Co. has been incorporated under the Dominion Companies' Act, with a capital of $100,000 and offices in Quebec, to carry on a general navigation business, and to maintain and operate wrecking plants, docks, dry docks, etc. The provisional directors are: J. C. Kaine, M. P. Connolly, M. H. Kaine, C. E Taschereau, Quebec, Que., and J. Bird, Canton, N.Y.

The Quebec Navigation Co. has been incorporated under the Quebec Companies' Act, with a capital of $20,000 and offices at Quebec, for the purpose of carrying on the business of navigation in the Province, the conveyance of passengers and freight, towing vessels and other purposes relating thereto. The provisional directors are: L. Roy, D. Talbot, L. J. A. Rosa; J. A. Massicotte, J. Beaudry, Quebec.

The Bonaventure and Gloucester Interprovincial Ferry Co. has been incorporated under the Dominion Companies' Act, with $15,000 capital and offices at Bonaventure, Que., to operate ferry steamers for conveying passengers and freight between ports in Quebec and New Brunswick and various incidental purposes. The provisional directors are: A. Noel, J. Henry, A. Desbiens, J. F. Begeaud, Bonaventure, Que.; L. Noel, Levis, Que.

The Ontario and Quebec Railway and Ferry Co., in its application to the Dominion Parliament at the current session for a charter of incorporation, desired power to operate ferries on the St. Lawrence at any point between Kingston, Ont., and Quebec. As amended in committee the ferry operations of the company are limited to any point in the parish of Montreal, or the town of Hochelaga, to the parish of Chambly, Que. The provisional directors are C. Laurendeau, J. F. R. Beaudry, L. Garneau, E. and V. Cusson.



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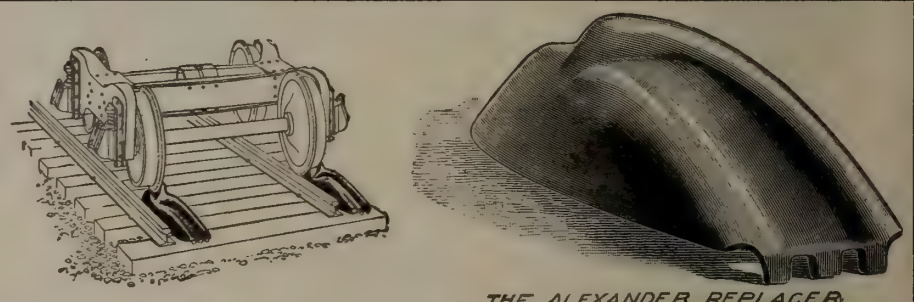

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Ontario and the Great Lakes.

A. M. Wiley, of Wiley and Marks, Port Arthur, Ont., died at Buffalo, N.Y., of pneumonia, Mar. 8.

The Cornwall canal will be unwatered between April 1 and 15 for the annual examination and repair.

A. A. Schantz has been appointed General Manager Detroit and Cleveland Navigation Co., succeeding the late W. C. McMillan.

H. Henderson has been appointed wharfinger of the Government wharf, Pelee Island, Ont., and A. Collins, wharfinger at Burk's Falls, Ont.

The contract for the construction of the new dock at the Provincial Government park, Rondeau, Ont., has been let to Blight and Fielder, Chatham, Ont.

The Peninsula Tug and Towing Co. has been granted a license under the Ontario Act respecting extra-Provincial Companies, F. Wood, Wiarton, Ont., being appointed its attorney.

The Calvin Co. is arranging to purchase a steel steamer in Great Britain for the pulpwood carrying trade. H. A. Calvin and Capt. A. Malone are in Great Britain looking for a suitable steamer.

The Dominion Dredging Co., a Dominion corporation, has been registered under the Ontario act respecting the licensing of extra-provincial corporations. E. A. Larmouth, Ottawa, has been named its attorney.

The two new Upper Lake steamers which the C.P.R. is having built at Glasgow will be cut in two after they reach Canada. The sections will be towed through the Welland Canal and re-riveted on reaching Lake Erie.

The Canadian Northern Ry. has chartered the str. Sequin, which has been remodelled and fitted up for the passenger as well as the freight trade, and will operate her between Owen Sound, Collingwood, Parry Sound and other points.

The Dominion Government is being asked to construct a dam in French River, for the purpose of maintaining the water of Lake Nipissing, Ont., at a minimum level, and thereby improve the navigation. The cost is estimated at $16,000.

The acting Minister of Public Works informed a Toronto deputation recently that the Government engineers favored the cutting of a new channel some distance south of the present western entrance, rather than the deepening of the present channel.

The tug Lutz, employed in keeping the car ferry channel between Sarnia, Ont., and Port Huron, Mich., free of ice, had a large hole knocked in her side by an ice floe, Feb. 20. This is the second occasion this winter that the Lutz has been damaged in a similar manner.

The Government has decided to have a survey made to ascertain the practicability of the construction of the Trent Valley canal from Lake Simcoe to Georgian Bay, by a route to Nottawassaga Bay, instead of by the Severn River valley as at present proposed.

The charge of manslaughter preferred against Capt. Boult as a result of the wrecking of the str. Golspie in Dec., 1906, has been heard at Sault Ste. Marie. A verdict of acquittal was entered, and the judge said that Capt. Boult was absolutely free from all blame in the matter.

The Shipmasters' Association in the U.S. has petitioned the Department of Railways and Canals to retain J. Boyd in his position as Superintendent of the Sault Ste. Marie canal. The resolution passed by the Detroit branch of the association speaks highly of his efficiency and courtesy.

The str. Winona, now lying at Collingwood, Ont., has been sold by the underwriters to a syndicate, which will have her repaired at the opening of navigation. The names of the members of the syndicate have not been made public, but it is understood that R. O. and A. B. Mackay, Hamilton, Ont., the managers for the original owners, are interested.

The Montreal Transportation Co.'s two steamships which are being built in Scotland will have a capacity of 3,000 tons each. The steamers have been renamed Glenmount and Stormount, and are expected to arrive in Montreal May 1 and May 15 respectively. They will be placed on a route between Sydney, N.S., and Fort William, Ont., carrying steel rails westbound.

The Ojibwa Carp Co. has been incorporated under the Ontario Companies' Act, with a capital of $40,000 and offices at Windsor, Ont., to engage in fishing and in connection therewith to own steam and other vessels. The provisional directors are: E. A. Davis, Detroit, Mich.; A. Chappus, A. Gignac, Sandwich, Ont.; F. D. Davis, A. F. Healy, Windsor, Ont.

The U.S. War Department on the request of the Lake Carriers' Association has drawn up a set of rules for the navigation of the narrow channels of the Detroit River, known as the Limekiln Crossings, opposite Amherstburg, Ont., and will station a patrol boat in the river to enforce them. Passenger steamers will have privileges not accorded to freight steamers.

Arrangements are being made to run a number of freight steamers between Port Stanley and Fort William, Ont. Millers at St. Thomas and other points desire to have their grain delivered at Port Stanley instead of at Goderich or Point Edward, and local reports state that N. C. Sinclair, St. Thomas, is making arrangements with a Montreal firm for placing four steamers on the route.

A deputation from the Rainy River district waited on the Dominion Government Mar. 3, and asked that an appropriation be provided during the current year for the construction of a lock at the Long Sault rapids. This lock in conjunction with that under construction at Fort Frances would add a considerable mileage to this inland waterway. The cost of the lock is estimated at $250,000.

The Dominion Government is being asked to widen and deepen the harbor at Port Burwell, Ont., so as to accommodate an increasing railway car ferry trade. The C.P.R. is the Canadian connection of a car ferry running from Ashtabula, Ohio, but J. H. Teall is arranging for the construction of a short line of railway which will receive its coal freight by car ferry from Conneaut, Ohio, and the present accommodation at the harbor is not sufficient for the additional trade.

The sandbars at the mouth of Rainy River, Ont., have been an increasing source of difficulty in the navigation of the river by the larger steamers, and in 1906, the Kenora was compelled to discontinue her trips on this account. Representations have been made to the Dominion Government, but so far nothing has been done in the way of clearing away the obstruction. Unless something is done at once it is feared that navigation, except for the smallest steamers, will have to be entirely suspended.

The St. Clair and Erie Ship Canal Co., which was incorporated by the Dominion Parliament in 1879 to construct a canal from Lake St. Clair to Lake Erie, thereby shortening the route between Lake Huron and Lake Erie by 150 miles, has been refused a further extension of time. Another company, the St. Joseph Transportation Co., which proposed to shorten the distance between the same two lakes by 300 miles by the construction of a canal from St. Joseph to Port Stanley, has been refused a charter by the Dominion Parliament at its current session.

The steamer for which the Hamilton and Montreal Navigation Co. has placed an order, will be built on Lake Erie, and will have the following general dimensions: length, over all, 460 ft.; breadth, 53 ft.; moulded depth, 29 ft. She will be equipped with quadruple expansion engines, cylinders 17½, 26, 37 and 54 in. diameter by 42 in. stroke, to which steam will be supplied by two Scotch boilers 13 ft. 2 in. diameter by 12 ft. long, fitted for forced draught. The vessel will have a capacity of 8,000 tons of ore, and will be fitted with every modern device for the quick handling of cargo.

The limits of the port of Sarnia, Ont., have been extended so as to include all the waters of the St. Clair River, and its several outlets into Lake St. Clair, including any dredged channels east of the International boundary. The following has been added to the general regulations for the government of ports to which the Canada Shipping Act applies: "43. All through-bound vessels in passing through the St. Clair River in the vicinity of Stag Island, Sarnia harbor, shall keep to the right, that is to say, all up-bound boats shall pass through the eastern channel and all down-bound boats shall pass through the western channel. This rule shall apply to through-bound vessels only, and not to vessels running between local points on the river, which vessels may take either channel, conforming to the ordinary rules of the road at sea."

The reports and other papers relating to the Trent Valley Canal were laid before the House of Commons Feb. 27. These include the report of E. J. Walsh, advising the adoption of the Trenton outlet for the southern end of the canal. The surveys made for this outlet covered three routes from Rice Lake, viz.: Port Hope, Cobourg and Trenton, and the estimates prepared were for a 6 ft. and an 8 ft. navigation. These were:

	6 ft.	8 ft.
Port Hope	$3,541,917	$3,958,051
Cobourg	7,906,401	8,236,040
Trenton	3,118,811	3,997,482

The Minister of Railways and Canals approved of this recommendation, and the Government has concurred. One of the principal reasons for the recommendation of the Trenton route is that a large number of wate powers will be developed.

Detroit, Mich., despatches state that a U.S. shipbuilding company is considering the advisability of establishing a shipyard and dry dock at a Canadian Upper Lake port. In this connection it was stated in Toronto Mar. 8, that a contract had been let to Whalen and Bowman, for the construction of a dry dock at Port Arthur, Ont., and that New York interests were financing the construction. F. Bowman subsequently stated that there was nothing in the report. At the Fort William, Ont., Town Council meeting, Mar. 13, a proposal was submitted for the establishment of a steel shipbuilding plant there. The company propose to expend $1,000,000 in the laying out of the yards and the equipment of the plant, and to provide $500,000 as working capital, and to employ 350 men for two years and 500 men thereafter. In return it is asked that the town give a guarantee of interest on $1,000,000 for 20 years at the rate of 2%, contribute $15,000 towards the purchase of a site, or 50% of the total cost if one-half of the total cost exceeds $15,000; and grant an exemption from taxation, except for school and local improvement purposes for ten years. The council passed a resolution approving of the proposal, and a by-law will be submitted to the taxpayers at an early date.

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Manitoba, Saskatchewan, Alberta, Etc.

D. A. Keizer, civil engineer, has completed a survey of the Red River, and has prepared plans showing the location of all obstructions to navigation in the vicinity of Winnipeg. The report and plans have been sent to Ottawa for the consideration of the Government.

Corpl. Sellers, of the Royal North-West Mounted Police, who arrived at Ottawa Mar. 4 from Fort Churchill, Hudson Bay, with despatches from Major Moodie, states that Oct. was the finest month of last year, and that the bay was open for navigation until nearly the end of Nov.

The question of the extension of the boundary of Manitoba to Hudson Bay, was discussed at length during the recent provincial elections. The Manitoba Government's claim is for so much of the territory of the present district of Keewatin as would give Manitoba a seaboard extending from near Moose Factory to Fort Churchill. The Liberal opposition expressed its willingness to be satisfied with an extension of boundaries which would give the province a port at the outlet of Churchill River.

B.C. and Pacific Coast Marine.

Capt. H. A. Mellon, of Bureau Veritas, Vancouver, B.C., has been appointed surveyor of Norwegian vessels entering that port.

The British Columbia General Contract Co. has commenced work on the erection of the new wharf at Victoria, B.C., for the Alaska Steamship Co.

An effort is being made to raise the tug Stranger, which sank in the Fraser River off Westham Island, Feb. 6, owing to a collision with an ice floe.

The customs outport of Port Simpson, B.C., has been detached from the port of Victoria, B.C., and placed under the survey of the port of Prince Rupert, B.C.

The Victoria and Sidney Ry. management has under consideration plans for a tug and two car barges for a ferry service between Sidney, B.C., and Blaine, Wash.

The Union Steamship Co. is negotiating for the purchase of the wooden str. Morning Star, formerly engaged as a missionary steamer in the Southern Pacific Ocean. She was built at Essex, Mass., 1900.

The C.P.R. str. Princess Victoria resumed her place on the Vancouver-Victoria run, Feb. 21, after undergoing repairs. The Charmer has been running in her place since the Princess Victoria ran on Lewis rock in Dec.

The Graham Island Milling, Coal and Transportation Co., operating on Graham Island, the most northerly of the Queen Charlotte group of islands, is enquiring for a tug and a couple of schooners or barges for towing.

The str. President, which is being built at Camden, N.J., for the Pacific Coast Steamship Co., was launched recently. She is expected at Seattle, Wash., in June, and will engage in the excursion trade on Puget Sound.

The British Columbia Tie and Lumber Co. has placed an order for the construction of a steam tug for its business at Port Simpson. The tug will be 87 ft. long, 18 ft. wide, and 10.7½ ft. moulded depth; and her engines will be 220 i.h.p.

McKenzie Bros. have chartered the str. Halvard to run between Vancouver and Skagway, Alaska, during the current season in conjunction with the Haldis and Henrietta. The Halvard is expected at Vancouver early in April.

The Alaska Steamship Co.'s str. Portland ran on Gabriola Island during a fog Feb. 16, while on her regular run from Valdez, Alaska, to Seattle, Wash., and was successfully floated by the Salvor. She proceeded under her own steam to Seattle for repairs.

The Governor-General-in-Council has approved of a set of by-laws for the pilotage district of Vancouver, B.C. The district within which the by-laws are operative extends to all parts of the mainland coast of B.C., north of New Westminster pilotage district.

The Boscowitz Steamship Co. is looking for an additional steamer for the northern B.C. trade, and Capt. Johnson is visiting Great Britain to purchase a suitable vessel. Capt. Stratford has succeeded Capt. Johnson in command of the company's str. Venture.

The Western Fuel Co. has chartered a steamer now being built at Stockton-on-Tees, Eng., for its trade between Nanaimo, B.C., and San Francisco, Cal. Capt. Egeness, heretofore master of the Titania, in the same trade, has gone to England to superintend the construction of the steamer and to bring her out.

The steam whaler St. Lawrence arrived in Victoria, B.C., Feb. 11, from St. Johns, Nfld., after a voyage of 111 days. It was stated subsequently that Capt. Balcom has sold the St. Lawrence to the Pacific Whaling Co., which operates the steam whaler Orion. The Pacific Whaling Co. is establishing a whaling station at Esperanza Inlet, and will place the St. Lawrence there.

The C.P.R. Pacific Coast str. Princess Royal, under construction at Vancouver, B.C., is not yet ready, the work of construction having been delayed owing to strikes and other local causes. With regard to the report that a vessel similar in size and speed to the Princess Victoria is to be constructed, we are advised that the plans have not been settled, and that no contract has been let.

The British Columbia Marine Railway Co. has deposited with the Dominion Minister of Public Works a plan of a marine railway which it proposes to construct at New Westminster. The railway will be 600 ft. long, capable of docking vessels 250 ft. long, and with a cradle 35 ft. wide. The company is considering plans for the construction of a dry dock at Victoria, capable of accommodating large ocean-going vessels.

The B.C. Salvage Co., Esquimalt, B.C., has purchased the tug William Jolliffe, of Liverpool, Eng., as an addition to its fleet. The tug left Liverpool Feb. 7, and is expected at Esquimalt early in May. The William Jolliffe is a large ocean-going screw tug, and is capable of remaining at sea for 35 days at a stretch. Her dimensions are: length, 149 ft.; breadth, 26.2 ft.; depth, 14 ft.; and her sea speed is 15 knots an hour.

The Dominion Government is being asked to improve the harbor at Victoria, B.C., at a cost of about $1,000,000, the amount to be expended over a period of five years. The suggestions made include the dredging of the harbor from the outer channel to Point Ellice, ensuring a general depth of 20 ft., and also part of the upper harbor so as to maintain a depth of 25 ft. at low water; to cut away Songhees point and the outlying Tuze and Pinnock rocks; to build a retaining wall reaching 6 ft. above high watermark at the face of the cut at Songhees point, along a line to the vicinity of Point Ellice bridge and along the low lying areas of the Indian reserve.

The Superintendents of Canadian Canals met in Ottawa recently, to consider a revision of the rules and regulations governing the canals.

Notices to Mariners.

The following notices have been issued by the Department of Marine:

No. 5. Feb. 7—Nova Scotia—13. South coast, Lahave bell buoy replaced by gas and bell buoy. 14. South coast, Egg Island, whistling buoy replaced by gas and whistling buoy.

No. 6. Feb. 8—Quebec—16. River St. Lawrence, Saguenay River entrance, Lark Islet, fog horn discontinued. 17. River St. Lawrence, Les Eboulements, Cap St. Joseph, light improved. 18. River St. Lawrence, Lake St. Peter, Riviere du Loup (en haut), Louisville range light established.

No. 7. Feb. 11.—British Columbia—19. Strait of Georgia, Sandheads of Fraser River, gas buoy established. 20. Chatham Sound, Lucy Island, lighthouse established.

No. 8. Feb. 14.—Quebec—21. Gulf of St. Lawrence, Magdalen Islands, Bird rocks light, correction. 22. River St. Lawrence below Quebec, elevations of lights. 23. River St. Lawrence, Beaujeu bank, east end gas buoy replaced by gas and bell buoy. 24. River St. Lawrence, St. Thomas bank, gas buoy changed. 25. River St. Lawrence, Grosse Isle, gas buoy changed. 26. River St. Lawrence below Quebec, Madame reef, gas buoy changed. 27. River St. Lawrence above Quebec, Point St. Antoine, gas buoy changed.

No. 9. Feb. 15.—Newfoundland—28. Southeast coast, Cape Race, change in fog alarm.

No. 10. Feb. 25.—Nova Scotia—29. Bay of Fundy, Cape d'Or fog alarm, change in interval between blasts.

No. 11. Feb. 28.—Quebec—31. River St. Lawrence, ship channel between Quebec and Montreal, Ile du Moine lower range, Ile des Barques, light established. 32. River St. Lawrence, ship channel between Quebec and Montreal, Ile a la Pierre, Gallia bay range lights established.

No. 14. Mar. 7.—British Columbia—37. West coast of Vancouver Island, Tsusiat and Seven Mile Creek, lookouts and shelter stations established. 38. Vancouver Island, west coast, Barkley Sound, Sechart steamer available for life-saving service. 39. U.S.A., Washington, Juan de Fuca Strait, New Dungeness light station, change in fog signal.

The following have been issued by the U.S. Hydrographic Department:

No. 7. Feb. 16.—Detroit River—294 Michigan, buoys established.

Department of Marine Report.—The report for the year ended June 30, 1906, gives details of the work done during the year. Chief among the improvements noted is the deepening and widening of the St. Lawrence river channel from Quebec to Montreal. Before the close of navigation last fall a 30 ft. channel was completed from Montreal to Batiscan, and by taking advantage of the high tide from Quebec to Bastican a 30 ft. channel is now available from Quebec right up to Montreal. There are now 13 wireless telegraph stations on the St. Lawrence route and the Atlantic coast for commercial purposes, and two more are in course of construction. Several serious delays and probably accidents to ocean liners have been avoided by the use of this system. The report of the board of steamboat inspectors shows a total of 1,805 registered steamers, with a gross tonnage of 325,982. Of this number 316 belong to Toronto division, with a total gross tonnage of 72,390.

The United States Ship Subsidy Bill was talked out in the Senate, Mar. 4, after a sitting continuing over the Sunday.

Carter-Halls-Aldinger Co., Limited, has been incorporated under the Manitoba Companies' Act, with offices at Winnipeg, and a capital of $50,000, to carry on the business of contractors, including the construction of canals, piers, wharves, bridges, telegraph and telephone lines, railways and tramways; to act as wholesale and retail dealers in railway and general contractors' supplies; to construct and operate bridges and tramways on the company's property, and to operate steam and other vessels. The provisional directors are: W. H. Carter, contractor; P. C. Locke, J. E. Robertson, Winnipeg; F. E. Halls and A. H. Aldinger, Chicago, Ill.

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Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre

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An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160 Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106 10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

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Calgary, Alta.		Winnipeg, Man.

THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Fort William to Montreal.

A number of questions affecting the development of the marine interests of Canada, by the improvement of the inland waterways, and the provision of adequate and modern facilities for handling cargoes at Montreal, have been under discussion recently. On Feb. 27 a deputation introduced by W. Harty, M.P. for Kingston, Ont., and representing business men and vessel owners from Montreal, Kingston, Toronto, Winnipeg and other points, waited on the Premier and other members of the Dominion Government, to urge the necessity of deepening the Welland canal so as to provide for the passage of vessels of 20 ft. draught. The delegation presented a petition asking for the enlargement, which was endorsed by 24 Boards of Trade, the Dominion Marine Association, the Winnipeg Grain Exchange and other public bodies. The speakers were A. McFee, Montreal, who said the pressing need of the moment was the enlargement of the Welland canal so as to admit vessels of the same capacity as passed through the Sault Ste. Marie canals; H. W. Richardson, Kingston, who pointed out the benefits that would accrue to Canadian trade if the 20 ft. draught grain steamers of the Upper Lakes could be discharged at Kingston or Prescott; D. W. Bole, Winnipeg; E. Rogers, Toronto. The Premier in reply said it was the policy of the Government to make adequate provision for bringing out the produce of the west by all available routes. If there was money enough ahead the Government would be disposed to go on with the work suggested at once, but there were many costly works of national importance demanding immediate attention. While the Government was a progressive one, it had to be economical. The whole question, however, would receive very careful attention, and if funds could be found the work would be done.

The Minister of Marine speaking at a luncheon given by the Montreal Harbor Commissioners Mar. 2, said the plans which had been outlined by the Commission for the development of the port called for the expenditure of a vast amount of money, but the credit of the Commission was good with the Government. He would be pleased to do all he could to further the Commission's plans because the interests of the port of Montreal belonged to the nation and not to the city alone. It was not enough to properly equip the harbor; the Government must see that the transportation ways were so improved that all the western trade of the continent would be brought to Montreal instead of being carried to U.S. ports To-day one-third of Canada's western trade is going via Montreal and two-thirds via Buffalo and other U.S. ports. This must not be. The railways and other transportation interests must work to see that this Canadian trade reaches the ocean through Canadian channels. Why should not Canada make the necessary improvements all along the line to ensure that the whole of this trade should in future go down the St. Lawrence channel and through the port of Montreal? Why not carry this work up as far as Fort William and make such improvements there, and so equip it with ice-breakers that it can keep open as long and handle traffic as well as Duluth? The elevator which was being built at Port Colborne should prove of material assistance in bringing grain to Montreal. The Government intended to carry on the work of improving the St. Lawrence channel with as much vigor as the improvement of Montreal, not only to afford the necessary accommodation for the big vessels, but to secure a reduction of the insurance discrimination. The Government will not spare any money to make the St. Lawrence shipping route the finest and safest channel possible. G. W. Stephens, Chairman of the Harbor Commission, said the plans which were under consideration for the improvement of the harbor included the equipment and completion of the present facilities as soon as possible; to bring together the eastern and the western divisions of the harbor by an elevated track system; the addition of six new berths for ocean-going steamers; and the making arrangements for classifying freight so as to bring about a reduction in the charges at the port. The Commissioners were completing their plans and proposed at the earliest possible moment to lay them before the Government and obtain the necessary sanction to borrow the money required to carry out the permanent works for the next ten years.

In the House of Commons Mar. 4, the discussion was resumed upon a resolution calling upon the Government to act on the report of the Transportation Commission, which recommended the carrying out of many works for the improvement of the inland waterways, and the equipment of the harbors, from the head of the lakes to Halifax. After considerable discussion, in which reference was made to the Georgian Bay Canal surveys, the harbor improvements at Port Arthur and Fort William, the Trent Valley Canal project, the works in progress at Port Colborne, and the St. Lawrence channel improvement, an amendment was adopted to the effect that the Government, having regard to the public service generally, was making reasonable progress in acting upon the report of the Commission.

The Steamboat Cayuga's Trial Trip.

As the Niagara Navigation Co.'s new steamboat Cayuga will be in service next summer, the following report by Capt. C. Moller, of her trip from Toronto to Charlotte, N.Y., and return, on Aug. 15, 1906, will be of interest:

9 a.m., took in moorings and left dock; 9.30 a.m., passed through the Western Gap, course S.W. ¼ W. by comp. towards Port Credit.

10.10 a.m., turned ship, steering E. by S. by comp. Port Credit bore by comp. W. by N.

10.32½ a.m., Gibraltar Pt. bore by comp. N. by E. dist. 5.6 miles. Log 9′, wind easterly, moderate breeze.

0.25 p.m., Olcott Lt. bore by comp. S. by W. dist. 8 miles. Log 38.5.

1.1½ p.m., 30 Mile Pt., bore by comp. S. by W. dist. 7 miles. Log 48.

2.53 p.m., Braddock Pt. bore by comp. S. by W. dist. 6 miles. Log 77.5.

Average speed 19.3 miles for trip across. Wind easterly, light, sea smooth.

6.14 p.m., Braddock Pt. bore by comp. S. by W. dist. 6 miles. Log 86.

8.03 p.m., 30 Mile Pt. Lt. bore by comp. S. by W. dist. 7 miles. Log 117.

10.12 p.m., Gibraltar Pt. Lt. bore by comp. N. by E. dist. 6 miles. Log 154¼.

Turned ship round and steered for Eastern Gap.

11.30 p.m., moored alongside dock, Toronto.

Average speed 21.2 miles for return trip.

On the return journey to Toronto, after leaving 30 Mile Pt. at 8.03 p.m., the boat arrived at Gibraltar Pt., a distance of 47 miles, at 10.12 p.m., being an average speed for this part of the run of 22.4 miles per hour.

C. G. Chisholm, lecturing on inland waterways before the Royal Geographical Society, London, Eng., Feb. 27, said the result of the survey of Canada was, that on the long hauls, the railways would be able to enter into very effective competition with the inland waterway system.

The Lake Freight Situation.

Our Winnipeg correspondent writes: The freight conditions for the opening have improved greatly since my last report, as the stocks of grain at the head of the Lakes have shown a very decided increase over what was expected from the severe winter, and the indications now are that considerable more wheat should be in store on the opening than a year ago. By the middle of March practically all the Canadian tonnage had been chartered for first trips at 2c. to Georgian Bay ports, 5⅛c. to Kingston, and 7c. to Montreal; with later trips a fraction higher. Practically all the business so far has been confined to Canadian channels, and with the increased stocks, and the demand for tonnage there will undoubtedly be considerable movement by U.S. boats to Buffalo. A duty of 10c. a bushel has been placed on flax entering Canada from the U.S., which will have the effect of confining the flax business from Fort William directly to Canadian bottoms, as in the past, when this commodity was free, U.S. boats could handle it from Fort William to Port Huron, and the flax could again enter Canada for crushing, duty free. The Canadian Lake and Ocean Navigation Co. has placed orders for three new lower lake freighters similar to the Ames, Pellatt and Plummer, to be delivered at Montreal by the opening of navigation. These boats will trade in connection with its line between Montreal and Fort William.

The opening will be delayed considerably this season owing to ice conditions, the fields on Lakes Superior and Huron being very solid and very extensive, and the ice in the Sault Ste. Marie River being solid from end to end, averaging 21 ins. thick. In Fort William the ice is 36 ins. thick, and in Duluth 16 to 34 ins., from which it is figured that navigation will not open on the Upper Lakes before May 1.

The Whitney-Monguagon Collision.

The Supreme Court of Canada has given judgment in the action brought by the St. Clair Navigation Co. and the Southern Coal and Transportation Co. against the vessel D. C. Whitney, of Cleveland, Ohio, reversing the judgment of Judge Hodgins, of Toronto, delivered some months ago, finding the ship liable for the damages sustained by the plaintiff by reason of a collision with the plaintiff's ship Monguagon in Sandusky harbor, Ohio, in Nov., 1904. On behalf of the Whitney all liability was denied, and among other interesting questions contested was that of the jurisdiction of the Canadian Court of Admiralty to take cognizance of the case owing to the fact that the collision was in U.S. waters, and both ships were of U.S. register, and that no Canadian interests were involved. The Whitney was seized at Amherstburg under process of the Canadian Court in the course of a voyage between U.S. ports, but while she was in the Canadian channel between the Island of Bois Blanc and the Canadian mainland. The seizure was made by the Sheriff of Essex county, who boarded the Whitney with a tug and brought her into Amherstburg, where she was detained until bail was given. The judgment of the Supreme Court finds that the arrest of the ship was illegal, and that under the circumstances, while the U.S. ship was pursuing her voyage between U.S. ports, she was not amenable to legal process at the instance of a Canadian Court. The appeal on behalf of the owners of the Whitney was, therefore, allowed, and the plaintiffs were ordered to pay all costs. W. D. McPherson, K.C., Toronto, was counsel for the Gilchrist Transportation Co. of Cleveland, owners of the Whitney, and M. J. W. Hanna, K.C., of Windsor, for the plaintiffs.

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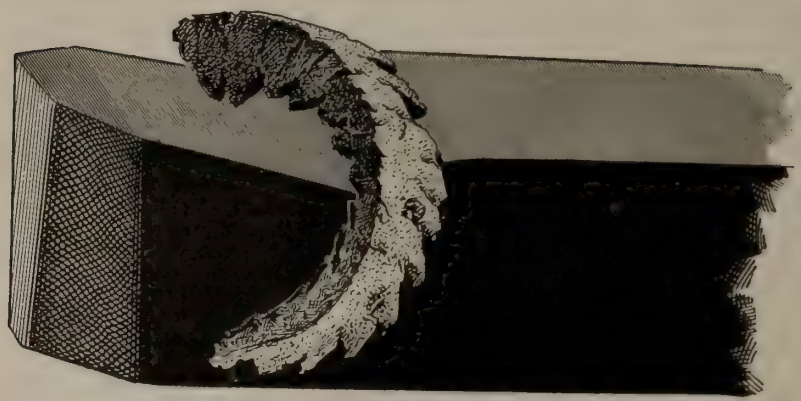

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Among the Express Companies.

The Canadian Ex. Co. has leased the Pentagon block, Granville St., Halifax, N.S., for an office building.

During the season of 1906 the Dominion Ex. Co. shipped out of Ontario 1,192 deer, 104 moose and three wolves.

J. H. Hetherman, Route Agent Canadian Ex. Co., Stratford, Ont., received two scalp wounds in an accident on the G.T.R. near Guelph, Ont., Feb. 26. His injuries were not very serious.

W. Hutchins, Toronto, and J. J. Nicholson, Montreal, Dominion Ex. Co.'s messengers, were killed in a collision on the C.P.R. at Mountain, Ont., Mar. 1. The express car and its contents were burned.

The Dominion Ex. Co. ceased operating over the Qu'Appelle, Long Lake and Saskatchewan Ry., Regina to Prince Albert, Sask., Mar. 18, and the Canadian Northern Ex. Co. placed its service on the line on the same date.

The Postmaster-General in reply to a question in the House of Commons recently stated that it had been decided to drop the proposal that the Post Office Department should carry parcels c.o.d., owing to the strong opposition evoked.

The Dominion Ex. Co. has notified its agents that classification and tables of graduated charges 17, revised to Nov. 15, 1906, should be used in assessing the through charge on International business to or from points in the U.S., and in Canada only between common points of this company with American, National, Great Northern, Pacific, or United States express companies. Between other points in Canada not included above, classification and tables of graduated charges 16. revised to Aug. 1, 1905, and amendments are to be used until further notice.

The Express Traffic Association of Canada has been formed for consultation and mutual advice in regard to tariffs and classification, and the publicity of the same; promotion of business without discrimination as to individuals or localities, and to aid in the proper observation of the laws relating to and regulating commerce. So far the work of the Association has consisted mainly in arranging for a uniform system of filing of tariffs required by the Board of Railway Commissioners. Sub-section 5 of the regulations relating to the filing of tariffs provides that "all provisions of the Railway Act relating to freight tolls and freight tariffs, in so far as such provisions are applicable to and not inconsistent with the provisions of this section, shall apply on express tolls and tariffs." As freight tariffs and freight tolls are made up in an entirely different manner from express tolls and express tariffs, a rather difficult problem was placed before the Railway Commission and the express companies. After a number of conferences and a good deal of correspondence a plan for filing tariffs satisfactory to both sides was determined upon, and the work was considerably facilitated by the Board being able to communicate with the Association as representing all the companies. All the tariffs required by the Board to be filed by Mar. 1, have been filed. W. H. Burr, Auditor Dominion Ex. Co., Toronto, is Chairman of the Association.

F. E. Hodgins, K.C., Toronto, speaking at the Canadian Club, Ottawa, Mar. 10, advocated the establishment of a Canadian cruiser fleet to keep trade routes open in time of war, so as to furnish food supplies to Great Britain. He suggested eight 17 knot cruisers to cost $5,000,000 each, to be built in the next 16 years.

Telegraph and Cable Matters.

The G.N.W. Telegraph Co. has opened an office at Cardinal station, Ont.

The Dominion Government telegraph line has been opened from Castle Bay to North Sydney, N.S.

The C.P.R. Telegraph Department has opened a day and night branch office in the Chronicle Building, Quebec.

The Brantford, Ont., City Council is calling upon the G.N.W. Telegraph Co. to remove its poles from Colborne St. in that city.

The Halifax and Bermuda Cable Co. has completed the repairs to its cable line and land connections, necessitated by the recent earthquake at Kingston, Jamaica.

The Western Union Telegraph Co. has notified the operators at its principal offices in Canada, as well as in the U.S. and elsewhere, that a 10% increase would be given to date from Mar. 1.

The Edmonton, Alta., Board of Trade has asked the Dominion Government for an extension of the Government telegraph system to the Peace River district. There is an increasing population at Fort Vermilion, Dunvegan, Grand Prairie, at points along the Lesser Slave Lake, and at Peace River Landing.

Telegraphic communication with Prince Edward Island has been established by means of the Marconi wireless system from Pictou, N.S. The Dominion Government station at Cape Bear is the receiving point in P.E.I., and the messages are despatched from thence over the land telegraph lines in the island. It is not expected that the Anglo-American Telegraph Co. will be able to repair its cable before May, when the wireless telegraph service will be given up. C. Dantor, Superintendent Government Wireless stations, has charge of the installation.

Senator Davis asked the Senate Mar. 8 to pass a resolution for the appointment of an expert to control telegraph and telephone companies under the Board of Railway Commissioners. He claimed that the telegraph system, particularly in Western Canada, was inefficient, and the charges exorbitant. It was pointed out that the Board of Railway Commissioners had full powers over these companies, and could obtain whatever expert assistance was necessary for their purpose. The resolution, if adopted, would place the telegraph and telephone lines under the control of one man, and the Government could not accept it. Senator Davis withdrew the motion.

The Mackay Companies.

Following is the trustees' annual report: The Mackay Companies owns the whole or part of the capital stock of 102 prosperous cable, telephone and telegraph companies in the U.S., Canada and Europe, including the entire capital stock of the Commercial Cable Co. and the various companies constituting the land line system, known as the Postal Telegraph. It is the policy of the trustees to make the basis of the Mackay Companies so broad and diversified as to render impossible any fundamental impairment of the value of the preferred or common shares. Accordingly, the investments include stocks in submarine cable companies in the Atlantic and Pacific oceans, and in the Postal Telegraph land line system, and in dividend-paying stocks in the best telephone companies. The Mackay Companies is by far the largest stockholder in the American Telephone and Telegraph Co., commonly known as the Bell Telephone Co., its holdings being more than four times those of any other stockholder in that company. The trustees believe that the present friendly relations with that company should be cemented in the interest of the shareholders of both companies and also of the public at large.

Notwithstanding these days of money borrowing and mortgage giving, the trustees are again able to announce that the Mackay Companies has no debts. Its authorized capital is $50,000,000 preferred shares and $50,000,000 common shares, of which there are outstanding $50,000,000 preferred shares and $41,380,400 common shares. During the past year $9,354,400 preferred shares have been issued in exchange for stocks of corporations, which, in addition to strengthening the position of the Mackay Companies, pay as much or more dividends than the corresponding dividends paid on the Mackay Companies' preferred shares. The entire authorized preferred shares of the Mackay Companies have now been issued, and no further preferred shares may be issued, excepting on a vote of the shareholders. The outstanding common shares have not been increased during the past two years. The Mackay Companies, in its investments, confines itself to first-class cable, telephone and telegraph stocks. The shares of the Mackay Companies were listed on the New York Stock Exchange on Jan. 23, 1907.

Dividends have been regularly paid on the preferred shares since April, 1904, at the rate of 4% per annum, payable quarterly. Dividends have been regularly paid on the common shares since Jan., 1905, such dividends having been increased to 4% per annum, payable quarterly, Commencing July, 1906. The income of the subordinate companies of the Mackay Companies is largely in excess of the amount required to pay these dividends, but its policy is to obtain from its subordinate companies only enough money to meet the dividends on the Mackay Companies' shares. If the entire profits of the Commercial Cable Co. and its land line system for 1906 were paid to the Mackay Companies, as might legally be done, and if the Mackay Companies used all these profits, together with its income from other investments, for the payment of dividends, the amount would be sufficient to increase very largely the present dividend on the common shares, after paying the full dividend on the preferred shares. All surplus earnings are left in the treasuries of the subordinate companies for extensions and the development of the business and the increase of reserves.

During 1906 the earnings of the Commercial Cable Co. (which has paid regular quarterly dividends for over 17 years) have shown substantial gains in gross receipts and net profits, on both the ocean and land systems. After paying the dividend on its stock, a large amount remaining was carried to reserve, in accordance with its long established policy. The Commercial Pacific Cable Co. during 1906 laid submarine cables to China and Japan, and those cables are now in complete working order. The land line system, the Postal Telegraph, is being constantly extended, and also shows substantial increased gross receipts and net profits over the previous year. On Dec. 6, 1906, the 40 year monopoly of all telegraphic and cable business between Cuba and the U.S., granted by the Spanish Government in 1866 to the International Ocean Telegraph Co., and later acquired by the Western Union Telegraph Co., came to an end by the expiration of the 40 years. The trustees, deeming it important that that part of the world should also be reached by their cable and telegraph system, applied to the U.S. Governor in charge of the provisional government of Cuba for the usual permit for the landing and operation of a submarine cable between the two countries and such permit has just been granted. The first plan of the

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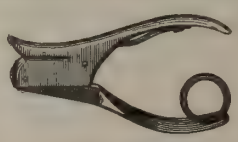

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trustees was to pursue the same route as that of the Western Union Telegraph Co., viz., a land line system from New York city to Florida and a submarine cable system from Florida to Havana. In order, however, to make this Cuban service equal to the Commercial Cable Co.'s service in the Atlantic Ocean, and the Commercial Pacific Cable Co. in the Pacific Ocean, and the Postal Telegraph Co. throughout the U.S., the trustees have decided to lay a submarine cable direct from New York City to Havana, thereby giving a three minute service as against an average 30-minute service. The entire cost of this important extension to Cuba will be paid out of current profits.

ASSETS.

Investments in other companies	$91,887,487.90
Cash	220,459.32
	$92,107,947.22

LIABILITIES.

Preferred shares issued	$50,000,000.00
Common shares issued	41,380,400.00
Surplus	727,547.22
	$92,107,947.22

PROFIT AND LOSS ACCOUNT.
Year ended Feb. 1, 1907.

RECEIPTS.

Income from investments in other companies	$3,310,327.93

DISBURSEMENTS.

Dividends paid to shareholders of The Mackay Companies	$2,985,874.00
Operating expense, including transfer agents, registrars, and trustees' compensation, office rent, salaries, stationery, engraving of certificates, listing of shares on New York Stock Exchange, etc.	24,624.83
Balance carried forward	299,829.10
	$3,310,327.93

The trustees for the current year are: C. H. Mackay, W. W. Cook, G. C. Ward, D. Clarke, E. C. Platt, P. Fisk, and R. A. Smith, of Toronto. The two latter are new trustees.

Among the corporations in which the Mackay Companies own stock are the Commercial Cable Co., Commercial Pacific Cable Co., Anglo-American Telegraph Co., Bell Telephone Co. of Canada, Dominion Telegraph Co., Halifax and Bermuda Cable Co., Montreal Telegraph Co., North American Telegraph Co.

General Telephone Matters.

The New Brunswick Telephone Co.'s exchange at Woodstock was burned out Mar. 1.

The Bell Telephone Co. is stringing two additional copper wires between Toronto and Montreal.

The Nova Scotia Telephone Co. has completed the purchase of the Valley Telephone Co.'s system.

The Nova Scotia Telephone Co.'s offices at Pictou, N.S., were considerably damaged by fire Feb. 21.

The Bell Telephone Co. has announced a substantial reduction in its long distance rates in Manitoba.

The Bell Telephone Co. has completed an extension of its lines from Papineauville to Plaisance, Que.

The Bell Telephone Co. has opened an office at Riding Mountain, Man., on its Neepawa-Grand View line.

The Bell Telephone Co. has completed the extension of its lines to Stroud, Ont., where an office has been opened.

The Bell Telephone Co. has given notice to the Edmonton, Alta., City Council of its intention to construct lines in that city.

The Saskatchewan Legislature is discussing a proposal for a government owned and operated telephone system in that province.

The Byron Telephone Association has arranged to extend its lines to Komoka, Lambeth, and other adjoining villages in Ontario.

The Bell Telephone Co. proposes to construct a long distance line from Goderich to Kincardine and Dungannon, Ont., during the summer

The Nova Scotia Telephone Co. has installed a private branch exchange service at the Halifax dockyard for the Dominion Government.

The Bell Telephone Co.'s officials have completed an inspection of its lines in Brandon, Man., with a view of a general improvement being made.

The Nipissing Telephone Co. has passed a by-law increasing its capital from $5,000 to $50,000, which has been confirmed by supplemental letters patent under the Ontario Companies' Act.

The Rainy River International Telephone Co. is arranging to string a long distance wire between Rainy River and Fort Frances, Ont., and will overhaul and improve its lines in Emo village, Ont.

J. H. Kelly, New Carlisle, Que., is one of the principal promoters of the Bonaventure and Gaspe Telephone Co., the incorporation of which has been applied for at the current session of the Dominion Parliament.

It is understood that the difficulty between Fort Saskatchewan and Edmonton, Alta., respecting telephones, is being settled by the Provincial Government taking over the telephone lines in Fort Saskatchewan.

The B.C. Telephone Co. is negotiating with the New Westminster City Council, for the purpose of having the electric light wires removed from the poles carrying the telephone wires, with a view of improving the service.

Estimates have been submitted showing that the cost of installing a 300 line telephone central energy system in Strathcona, Alta, would be $18,000, and for a magneto-call-drop-signal system $10,000, exclusive of buildings.

Wallace municipality, Man., has decided to proceed at once with the installation of a municipal telephone system. It is estimated that to provide telephone facilities for the 455 houses in the municipality would necessitate the building of 345 miles of pole line.

The Dunsford Telephone, Light and Power Co.-Operative Association has been formed at Dunsford, Ont., with the object of constructing telephone lines in Emily, Ops, Verulam and Harvey townships. Arrangements have been made for connection with the Bell Telephone Co.'s system.

The Premier of Manitoba stated, Mar. 16, that work would be commenced within 60 days upon the provincial telephone system, and that 1,000 miles would be put under contract. This was for the long distance lines. The wishes of the municipalities in towns and cities would be consulted as to the construction of local systems.

The Bell Telephone Co. is issuing $2,500,000 of new stock at par to shareholders of record Mar. 23, in the proportion of one share of new stock for every four shares now held. The right to subscribe expires April 17, and the payments over to be made in instalments of $25 per share, on May 1, July 2, Oct. 1, 1907 and Jan. 2, 1908.

The committee which proposes to acquire the Bell homestead at Tutela Heights, Brantford, Ont., as a memorial to the inventor of the telephone, desires to raise $40,000. About $10,000 has already been promised, over $6,000 having been raised in Brantford. The Ontario Government has been asked to vote $10,000 towards the project.

The Bell Telephone Co. offered, Mar. 13, to enter into a contract with the City of Toronto for an exclusive franchise, including the payment of $20,000 a year to the city, and such other conditions as may be equitable to the city and the company. The Board of Control authorizing the Mayor to obtain full details of the proposed contract.

The Yorkton, Sask., taxpayers have voted by 68 to 18 in favor of a by-law authorizing the Town Council to raise $10,000 on debentures, in order to secure a controlling interest in the Yorkton Northwest Electric Co. This company owns the telephone system in Yorkton, has 105 subscribers, and lines extending in different directions within a radius of 20 miles.

The Union of British Columbia Municipalities is asking the B.C. Legislature to pass an act to amend the powers of the B.C. Telephone Co. It is claimed that the company's privileges are too sweeping, especially with regard to its rights of entering upon any highway in the province, and sinking holes and utilizing the roads and streets at will.

The Bracebridge and Muskoka Lakes Telephone Co. has been incorporated under the Ontario Companies' Act, for the purpose of carrying on a general telephone business within the districts of Muskoka and Parry Sound. The provisional directors are: P. A. Smith, P. Hutchison and J. Thomson, Bracebridge, Ont., where the offices are situated. The capital is fixed at $10,000.

The Union of New Brunswick Municipalities has asked the Government to secure trol of the telephone lines in the province and carry on the business as a Government-owned utility. The Premier informed a delegation that at present the public interests would be sufficiently guarded by the Government measure placing the control of rates in the hands of the Lieutenant-Governor-in-Council.

The Vandorf Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Vandorf, Ont., for the purpose of carrying on a general telephone business in the county of York, exclusive of Toronto. The provisional directors are: G. J. Van Nostrand, A. J. Van Nostrand, H. Powell, Toronto; G. H. Powell, J. A. M. Van Nostrand, Whitchurch tp., Ont.

The Bell Telephone Co. has secured a five years' exclusive franchise in Ottawa, Ont., on the payment of $7,500 for the first year, and $5,000 a year subsequently, the city fire alarm wires to be carried on the company's poles, and the city to have 20 free telephones. The rates are to be Business—wall, $45; desk, $47; extension wall phones, $10 extra; and extension desk phones, $12 extra; residence phones, $25.

The New Brunswick Legislature has under consideration a government measure dealing with telephone companies operating in that province. It proposes to give the Lieutenant-Governor-in-Council power to regulate tolls and to compel companies to give connection with other telephone systems; and to extend their lines to localities where telephone service is needed and where there is a reasonable prospect of a line being remunerative.

The Dunnville Consolidated Telephone Co. pas been incorporated under the Ontario Comoanies' Act with a capital of $60,000 and hffices at Dunnville, to carry on a general telephone business in the county of Haldimand, Tuscarora and Onondaga tps., Brant county; Glanford, Binbrook tps., Wentworth county; Caister and Gainsborough tps., Lincoln county; and Wainfleet tp., Welland county. The provisional directors are: R. A. Harrison, T. Marshall, A.

JAMES THOMSON, Pres. and Mang. Director. J. G. ALLAN, Vice-President. JAMES A. THOMSON, Secretary. ALEX. L. GARTSHORE, Treasurer.

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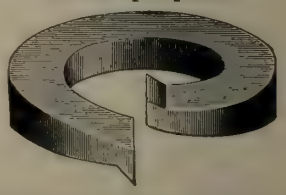

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W. Haun, M. L. Parry, E. E. Anderson, W. J. Aikens, Dunnville, Ont.

The Bell Telephone Co. has published a chart showing about 300 miles of rural telephone lines in the London, Ont., district, which are connected with its system. These rural lines include the St. Mary's Medina Telephone Co., with 28 subscribers; the Nissouri Telephone Association, which is adding lines for another 20 instruments, making 69 in all; the Thorndale lines with 44 instruments; and the Byron Telephone Co., which is extending its lines to take in 34 subscribers in addition to the present 24.

The Montreal City Council obtained extensive powers respecting the construction of conduits, and the compulsory use of the same by the telephone and other companies having pole lines in the streets, at the recent session of the Quebec Legislature. The Bell Telephone Co. has offered to place all the city's electric wires in its own conduits free of charge; maintain them without expense, remove all its own poles, and relieve the city of all expense save that of carrying the wires from the conduit manholes to the fire alarm boxes; on condition that it be specifically exempted from the operations of clause 1 of the bill, which empowers the city to tax all persons, firms, etc., producing or distributing, for public use in the city, motive power, light, heat, water or electricity, up to 5% of the gross earnings of the operating party.

The differences between the Bell Telephone Co. and its Toronto operators have been settled by the operators accepting a new working system. The new arrangement provides that operators work steadily for two hours, then have half an hour relief; one hour and a half more work; an hour for lunch, and the same hours in the afternoon. By this system no girl will work longer than two hours continuously. Though the hours to be spent at the switch board will number seven, the girls will be required to spend nine hours each day at their work. The company and the long distance operators will make some special agreements among themselves. The inquiry before the Government commissioners came to an unexpected ending in consequence. A report of the matter will, however, be presented to the Government.

The New Brunswick Telephone Co. is applying at the current session of the local legislature for an act authorizing it to increase its capital from $600,000 to $2,000,000; giving the directors power to fix the head office elsewhere than at Fredericton; fixing the number of directors at not more than 15 or less than nine; providing for the appointment of an executive committee; ratifying the amalgamation with the Central Telephone Co. (with protection of the New Cumberland Telephone Co.'s rights over the lines); and ratifying the purchase of the lines of the Madawaska Telephone Co., the Chatham Electric Light Co., the Miramichi Telephone Co., and of the lines owned by F. L. Pedolin. The bill is being opposed by the Union of Municipalities on the ground that it creates a trust or monopoly. The Municipalities Committee of the New Brunswick Legislature has approved of the New Brunswick Telephone Co.'s bill, authorizing an increase of the capital to $2,000,000. It was, however, decided to recommend the Legislature to insert a provision to ensure the use of the increased capital for the purpose of acquiring the Central Telephone Co. or other telephone companies.

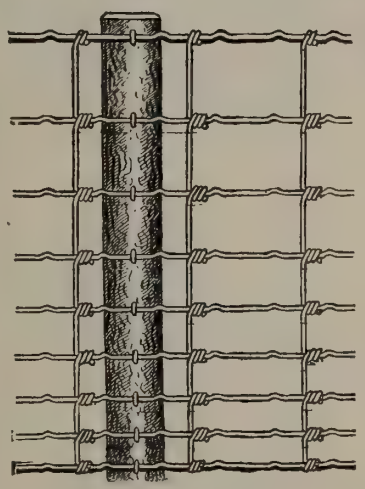
The Minister of Public Works for Alberta in a recent speech outlined the Government telephone policy. He stated that the Government was not only going into the long distance business, but was going to supply all cities, towns, rural municipalities and local improvement districts that desired it with telephones at the lowest cost, the province undertaking the installation, operation and maintenance of the whole system. The rate for the service has not been made public, but members of the Legislature in conversation stated that it is expected that it will be about $12 a year, with something like postage stamp prices for long distance connections. The Minister of Public Works asked the Legislature on Mar. 11 to approve of a bill providing for the construction of municipal telephone exchanges when desired by the municipality, and the construction of rural telephone lines by the provincial government. The estimates for the year, brought down Mar. 11, provided for the expenditure of $200,000, the estimated surplus upon telephone construction.

Bell Telephone Co. of Canada.

Following is the report for 1906 submitted at the recent annual meeting 16,950 subscribers were added during the year, the total number of sets of instruments now earning rental being 95,145. The company owns and operates 571 exchanges and 1,160 agencies. 6,318 miles of wire were added to the long distance system in 1906. The long distance lines owned and operated by the company comprise 43,400 miles of wire on 9,391 miles of poles. $1,038,000 of 5% bonds were sold during the year, the net premium on which, $51,900, has been carried to contingent account. 10,000 shares of new stock were offered to shareholders at 25% premium, and are included in the statement, bringing the paid-up capital to $9,980,800. The premium on these shares and on the last two instalments of the previous issue, amounting to $344,015.00, has also been carried to contingent account.

BALANCE SHEET.

Stock account		$9,980,800.00
Bond account		3,363,000.00
Contingent fund, 1905	$2,194,407.74	
Add premium on stock	344,015.00	
Add premium on bonds	51,900.00	
Add from revenue account	200,000.00	
		2,790,322.74
Revenue account		61,037.16
Unearned rental reserve		548,487.06
Insurance reserve		300,000.00
Accident reserve		150,000.00
Bond interest reserve		42,037.50
Sundry creditors		407,122.04
		$17,642,806.50
Plant and patent account, Dec. 31, 1905	$11,184,135.72	
Plant and patent account, added in 1906	2,553,865.58	
Plant and patent account, Dec. 31, 1906	$13,738,001.30	
Stores on hand	786,808.33	
Real estate	1,612,501.10	
Stock in other companies	1,011,406.50	
Due from agencies	190,307.24	
Debtors	221,692.13	
Cash	82,089.90	
		$17,642,806.50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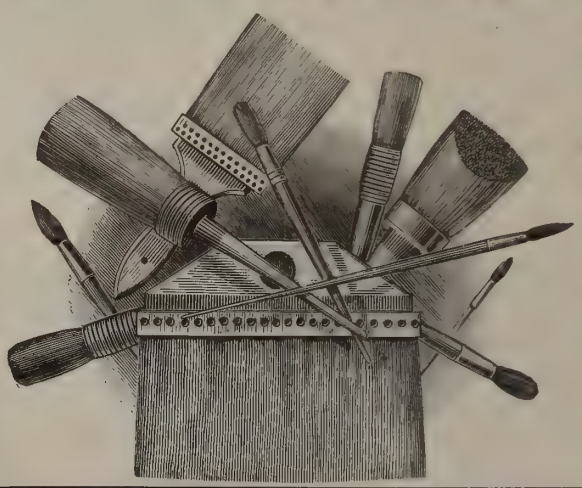

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S.S. Ottawa, May 4; S.S. Vancouver, May 6; S.S. Kensington, May 11; S.S. Dominion, May 18; S.S. Southwark, May 25th; S.S. Canada, June 1; S.S. Ottawa, June 8; S.S. Kensington, June 15; S.S. Dominion, June 22; S.S. Southwark, June 29.

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Exchange (less unearned rentals)	$2,775,601.93
Long distance lines	1,081,973.63
Private lines	16,140.45
Miscellaneous	265,618.71
	$4,139,334.72

EXPENSES.

Operating	$2,910,291.34	
Legal	41,467.18	
Insurance	31,420.76	
Bond interest	142,983.42	
Miscellaneous	20,316.93	
		$3,146,479.63
Net revenue for 1906		$ 992,855.09
Less dividends (Inc. Jan. 15, 1907)		726,677.38
		$ 266,177.71
Balance revenue from 1905		45,318.00
		$ 311,495.71
Carried to insurance reserve	$ 47,654.15	
Carried to accident reserve	2,804.40	
Carried to contingent account	200,000.00	
		250,458.55
Carried forward to 1907		$ 61,037.16

The meeting authorized the directors to issue $3,750,000 additional bonds, which will bring the bond issue up to a total of 75% of the paid-up capital.

Following are the directors for the current year: C. F. Sise, Hon. R. Mackay, L. P. Fish, R. Archer, W. R. Driver, H. Paton, C. Cassils, T. Sherwin, H. D. Warren.

Fort William Municipal Telephones.

The following figures are taken from the Fort William, Ont., Board of Water and Light Commissioners' financial statement, dated Dec. 20, 1906:

TELEPHONE CONSTRUCTION.

Debentures issued		$47,000.00
Unprovided		8,959.20
		$55,959.20
Jan. 1, 1906	$39,973.84	
Street wires	8,496.03	
Service connections	2,672.37	
Sub stations	4,856.42	
Printing and advertising by-law	110.54	
	$56,009.20	
Less amount paid on construction acct., Mrs. R. Smith	50.00	
		$55,959.20

EARNINGS.

Rated telephone subscribers	$12,564.50
Special telephone subscribers	64.30
Balance Jan. 1, 1906	3,214.49
	$15,843.29

EXPENDITURE.

General expense and fixed charges	$ 934.30
Switchboard	2,350.66
Street wires	918.88
Service connections	988.81
Rebates	539.77
Sinking fund paid Town Treasurer	1,222.98
Debenture interest paid Town Treasurer	1,845.00
Less depreciation 10%	704.28
	$9,504.68
Profit to date	6,338.61
	$15,843.29

The Board of Railway Commissioners has approved of standard freight tariff for the Brandon, Saskatchewan and Hudson Bay Ry., being Great Northern Ry., U.S., G.F.O., no. 17696, G.N. Ry., C.R.C., no. A-145.

The Dominion Department of Agriculture has issued in pamphlet form the regulations relating to the quarantine of animals which are in force during the current year. These, together with any additional orders made since the pamphlet was printed, may be obtained by transportation companies and others interested in the movement of stock on application.

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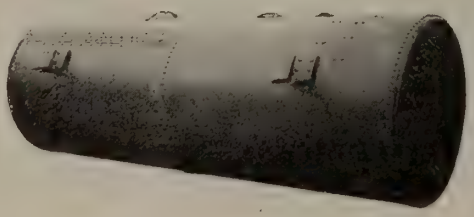

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The Grand Trunk Railway Company of Canada.

NOTICE is hereby given, that the Ordinary General Half-yearly Meeting of the Grand Trunk Railway Company of Canada will be held at the City Terminus Hotel, Cannon Street, London, E.C., on Thursday, the 11th day of April, 1907, at 12 o'clock noon precisely, for the purpose of receiving a report from the directors, for the election of directors and auditors, and for the transaction of other business of the company.

Notice is also given, that the Transfer Books of the company in London and Montreal will be closed from Monday, the 11th day of March, to the day of meeting, both days inclusive.

By order

C. RIVERS WILSON, *President.*
H. H. NORMAN, *Secretary.*

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E. L. Drewry.....Winnipeg.

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Canada Foundry Co.....Toronto.
Canadian Westinghouse Co.....Hamilton, Ont.

Air Compressors
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.

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James Smart Mfg. Co.....Brockville, Ont.

Axe Steel
Montreal Steel Works.....Montreal.

Axles
James Hutton & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Jas. W. Pyke & Co.....Montreal.
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Badges
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Baggage Checks
R. Woodman Mfg. & Supply Co....Boston, Mass.

Bearings, Side
Chicago Railway Equipment Co.....Chicago, Ill.

Blankets and Bedding
The Hudson's Bay Co.....

Blasting Powder
Standard Explosives Limited.....Montreal.

Block Pavement Preservative
Carbolite Carbolineum Co.....Toronto.

Boiler Compound
N. J. Holden Co.....Montreal.

Boiler Covering
Mica Boiler Covering Co.....Montreal.

Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
E. Leonard & Sons.....London, Ont.
Jno.McDougall,Caledonian IronWorks Co. Montreal
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Internally Fired
Robb Engineering Co.....Amherst, N.S.

Boilers, Portable
Canada Foundry Co.....Toronto.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Stationary and Marine
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
H. W. Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boiler, Staybolt Iron or Steel Bars
Falls Hollow Staybolt Co. Cuyahoga Falls, Ohio.

Boilers, Steam
Babcock & Wilcox (Ltd.).....Montreal.
H. W Petrie.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Water Tube
Babcock & Wilcox (Ltd.).....Montreal.
E. Leonard & Sons.....London, Ont.
Jno. McDougall,Caledonian Iron Works Co.Montreal
Robb Engineering Co.....Amherst, N.S.

Boilers Tubes
Jas. W. Pyke & Co.....Montreal.

Bolsters
Dominion Car and Foundry Co.....Montreal.

Bolts, Bridge
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Bolts, Carriage and Machine
Toronto Bolt and Forging Co.....Toronto.

Bolts, Track
Canada Foundry Co.....Toronto.
Nova Scotia Steel & Coal Co...New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Books
The Derry-Collard Co.....New York City.

Box Car Loaders
W. H. C. Mussen & Co.....Montreal.

Brake Beams
Chicago Railway Equipment Co.....Chicago, Ill.
Dominion Car and Foundry Co.....Montreal.

Brake Shoes
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.
N. J. Holden Co.....Montreal.
Railway Materials Co..... New York.

Brass and Copper Cloth
The B. Greening Co.....Hamilton, Ont.

Bridge Numbers
Acton Burrows Limited .....Toronto.

Bridges
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Bridges (Timber Preservative)
Carbolite Carbolineum Co.....Toronto.

Buckets
Cyclopean Iron Works Co.....Jersey City, N.J.

Bumping Posts
McCord & Co.....Chicago, Ill.
Mechanical Mfg. Co.....Chicago, Ill.

Buoy Lighting
Safety Car Heating and Lighting Co..New York.
Willson Gas Buoy Co.....Ottawa Ont.

Cables, Electric and Feeder
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.

Caboose Heaters
Geo. R. Prowse.....Montreal.

Caps
W. H. Coddington.....Hamilton Ont.

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Canadian Iron and Foundry Co.....Montreal.

Car Closets
Duner Co.....Chicago, Ill.

Car Furnishings
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Wm. C. Baker Heating & Supply Co..New York.
Gold Car Heating and Lighting Co....New York.
Safety Car Heating and Lighting Co...New York.
Peter Smith Heater Co.....Detroit, Mich.

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W. H. C. Mussen & Co.....Montreal.

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Dominion Car and Foundry Co.....Montreal.
J. T. Gardner .....Chicago, Ill.
Rhodes, Curry & Co.....Amherst, N.S.

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Castings
Crossen Car Mfg. Co.....Cobourg, Ont.

Castings, Brass
Canadian Bronze Co.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.
St. Thomas Brass Co.....St. Thomas, Ont.

Castings, Iron
Canada Car Co., Ltd.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.

Castings, Iron and Steel
American Brake Shoe & F'dry Co ..Mahwah N J.

Castings, Steel
Canadian Iron and Foundry Co.....Montreal.
W. Kennedy & Sons (Ltd.)....Owen Sound, Ont.
Montreal Steel Works.....Montreal.
Rhodes Curry & Co.....Amherst, N.S.

Cast-Steel Hammers
American Brake Shoe & F'dry Co...Mahwah, N J.

Cast-Steel Track Tools
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cast-Steel Wrenches
American Brake Shoe & F'dry Co...Mahwah, N.J.

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Goold, Shapley & Muir Co.....Brantford, Ont.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

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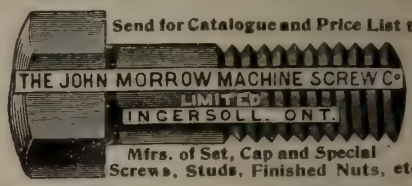
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Chicago Pneumatic Tool Co.....Chicago, Ill.

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F. B. Stevens.....Detroit, Mich

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The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

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Canada Car Co., Limited.....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

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Standard Explosives Limited.....Montreal.

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McCord & Co.....Chicago, Ill.

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Duner Co.....Chicago, Ill.

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Chicago Pneumatic Tool Co.....Chicago, Ill.

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Kerr Engine Co.....Walkerville, Ont.

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Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

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Japans
McCaskill, Dougall & Co.....Montreal.

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Wolfe Brush Co.....Pittsburg, Pa.

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Toronto Pressed Steel Co.....Toronto.

Plumbago
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N. J. Holden Co.....Montreal.

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Robb Engineering Co.....Amherst N.S.

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Preservative for Wood
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Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
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W. H. C. Mussen & Co.....Montreal.
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Continuous Rail Joint Co. of Canada...Montreal.
N. J. Holden Co.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Butterfield & Co.....Rock Island, Que.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.

Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

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Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

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O. M. Edwards.....Syracuse, N.Y.

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Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

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Babcock & Wilcox (Ltd.).....Montreal.

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The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

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Polson Iron Works.....Toronto.

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Railways Materials Co.....New York.

Shops
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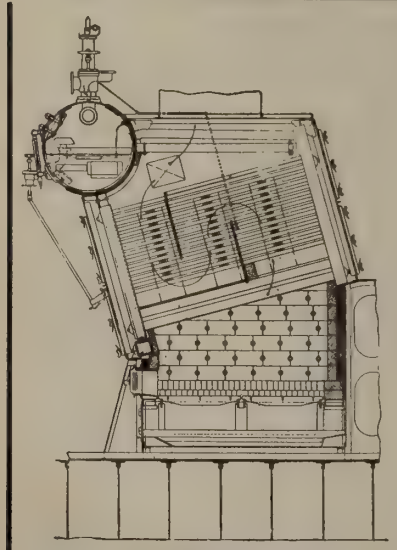
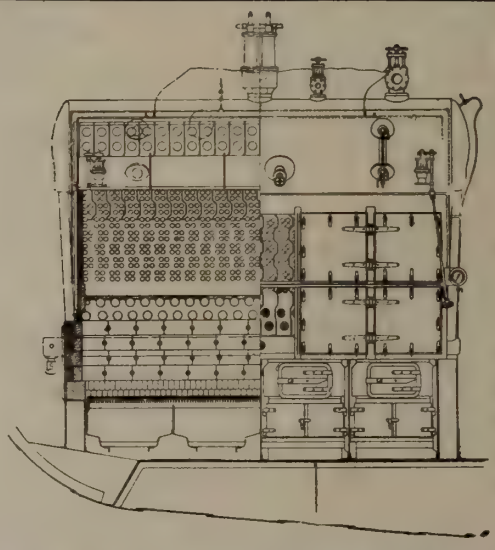
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal.





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The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

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Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

Spikes, Railway, Ship or Pressed
F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

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F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

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James Smart Mfg. Co.....Brockville, Ont.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

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Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel for Springs
James Hutton & Co.....Montreal.

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Jas. W. Pyke & Co.....Montreal.

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W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

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James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
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Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston, Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
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Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Targets
Acton Burrows Limited.....Toronto.

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Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co. Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

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Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

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Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
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Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Tool Steel
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

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R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
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Golden-Anderson Valve Specialty Co. Pittsburg, Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Woodworking Machinery
H. W. Petrie.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto.

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Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto

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See Purchasing Agents' Guide on page 377

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THE

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Old Series, No. 193.
New Series, No. 111.

TORONTO, CANADA, MAY, 1907.

Subscription, $1 a Year.
Toronto Postal Delivery, $1.25 a Year.

Reciprocal Demurrage.

By H. R. Patriarche, Manager Canadian Car Service Bureau, Western Lines.

The craze for railway legislation, so evident in the United States to-day, takes many peculiar forms. Among the most popular slogans is what is known as "reciprocal demurrage." The author of this phrase was intentionally or unintentionally a humorist, for the prominent feature of such bills has been their absolute lack of the faintest approach to reciprocity. Theory apparently says: "If a railway cannot perform that which its own interests demand, the proper procedure is to hamper its movements by legal persecutions and continuous financial drain." Any railway which fails to move traffic expeditiously suffers loss, for the life of a railway is constant motion. Where motion is retarded revenues decrease, where it stops they end.

The inability of railways to promptly provide empties for loading, under normal conditions, can nearly always be traced back to the failure of the public to unload or load promptly. In order to induce its patrons to release cars within a reasonable time, the railways charge a nominal toll of $1 a car per day, but this is only assessed after the car has been in the hands of the consignee or shipper 48 or 72 hours, many hours longer than necessary to accomplish actual loading or unloading. Various commodities, of course, take different lengths of time to handle; a car of sack flour can be unloaded in 45 minutes by six men trucking from car to warehouse, while a car of plain matched flooring would have to be handled much more carefully, and would require possibly eight working hours for unloading by team and storing in warehouse, a short haul. In addition to the 48 hours or 72 hours allowed for loading or unloading, the rules provide for extra time where cars have been bunched in transit, through wrecks, stress of weather, washouts, or for any reason not chargeable to the consignee or shipper, and during this free unloading or loading period the cars must be in position, accessible, and the weather suitable for outside work, otherwise an additional allowance must be made.

It is therefore evident to the unprejudiced mind that no business firm or institution need ever pay a dollar of car rental provided its facilities for loading or unloading cars are equal to the business it handles. As this, however, is not generally the case, car rental is collected daily, and to offset such collections the prejudiced members of the business communities are endeavoring to inflict a fine upon the railway companies under the above caption. Some two or three years ago the earnings of all the box cars in the United States were lumped, divided by 365, and again by the number of cars in commission. The result was an average earning of $2.09 a car per day, and this, it must be remembered, was the average per car regardless of the number of days said car was held for repairs or travelled light, without cargo. At certain seasons of the year a car will earn from $4 to $10 a day, and therefore it is readily seen that the toll of $1 a day represents a loss to the owners of the car of from $1 to $9 a day. From this it is evident that the enforcement of car rental is not a revenue proposition but an attempt to get proper movement of rolling stock. Anything which produces this result not only benefits the railways, but also every business interest shipping or receiving freight in car load lots.

P157

F. W. PETERS.

Assistant Freight Traffic Manager, Canadian Pacific Railway, Western Lines.

Let us consider the work of the Madden bill at present before the U.S. Senate, taking our viewpoint from Winnipeg, the metropolis of the last west. A fine of $1 a day is imposed for failure to provide cars within three days after ordering, and in addition to this the carrier must "pay all actual damages that such applicant may sustain, including the cost of the suit and a reasonable attorney's fee." The bulk of the grain movement in this country is from the west east to the lake gateways, Fort William and Port Arthur, 400 miles from the outskirts of the grain producing territory, and many millions of bushels are never placed under a warehouse roof until they reach the elevators at these points, the farmer loading direct from the fields to cars. It is easy to see the results of these long hauls when every man is attempting to get his grain to market before the close of navigation. Hundreds of thousands of cars must be hauled empty from Fort William and Port Arthur to distant loading stations in the west, as the eastbound movement of grain is far greater than the westbound movement of other freight. Grain is shipped from points north, west and south of Medicine Hat, which is 1,086 miles from Fort William. It is therefore evident that an order placed at Medicine Hat might have to be filled with cars from Fort William and to comply with the regulations of the Madden bill, these cars if immediately set in motion by wire would have to travel 362 miles for each 24 hours in order to reach Medicine Hat within the period allowed the railways to fill such order. And yet, after specifiying that cars must be provided in 72 hours, the Madden bill goes on to say that 60 miles a day is an acceptable average distance.

As an example, let us say that Brown & Co., grain dealers, Medicine Hat, Alta., place an order for 24 cars to load with wheat, the market price falling rapidly. The railway agent immediately wires his car service superintendent, who finds every empty in transit, or prospective empties at nearby points, booked for reloading at points intermediate between Fort William and Medicine Hat. The car service superintendent immediately wires Fort William to hurry forward 24 cars. These are started, though by no possible chance can they get to Medicine Hat in three days. They arrive in say 10 days, and the railway is charged $7 a car because the box cars had no wings and could not fly, total $168. But during the seven days wheat has dropped 5c. a bushel, and this also the railway must make good, total $1,200, and the cost of the court, say, $100; grand total $1,468. Brown & Co. collect this money and cars go forward, now the property of Smith & Co., who say they want them for a vessel sailing 19 days later. Through an unavoidable chain of circumstances it takes these cars 20 days to make the 1,086 miles to Fort William, and as the vessel has sailed the grain is put in the terminal elevator by Smith & Co. A suit is then started against the railway company and an additional 5c. per bushel is demanded on account of falling market, $1,220; cost of

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PRESIDENT.

storage to spring, say, $180; interest on investment at 6%, $1,008; costs of court $100, demurrage $24; grand total $2,512. Thus because the railway company did not accomplish the impossible and avoid the unavoidable, it must pay the owners of the grain $3,980, and this risk for the privilege of attempting to earn net freight of say $600.

Following the possibilities further, we will say that in the spring the market rises, and Smith & Co. find their grain is worth 10c. more per bushel than they paid for it. They are then ahead the railway's loss, $2,552, and the increase in value, $2,440, a total of $4,992. Does the railway get a share of this profit? Not according to reciprocal demurrage, for the reciprocating feature automatically retires at this juncture, and Smith & Co. pocket the full amount. Now, suppose during the seven days overtime it takes to get Brown's cars from Fort William, grain advanced 5c. a bushel. Will Brown come forward with a happy smile and pay the railway company the $1,200 he is ahead by such unavoidable delay? The reciprocal demurrage bill does not say so. Instead of dividing up his profits or giving the entire amount to the railway, Brown demands $7 a day per car, or $168 demurrage. Again, suppose that Brown & Co. know or have reason to suspect that 24 empties cannot be furnished in the specified time, and booked their order with the intention of cancelling it when filled. Does reciprocal demurrage reimburse the railway company for hauling 24 cars 1,086 miles? Of course not. Brown demands $168 for failure to place the cars within the specified time, cancels his order and pays the railway company $24 for the one day the cars stand on his siding, in addition to "a reasonable switching charge." The loss to the railway company in this event would be $144 reciprocal demurrage, the difference between a "reasonable switching charge" and the actual cost of hauling the cars this vast distance, say, $10 a car, or $240. Also the value of 24 cars for 10 days at, say, $4 a day, $960; total $1,344, and the railway must also haul these 24 cars to another point and suffer additional delay in arranging for loading by other parties. And this action of Brown & Co. may inflict an additional fine on the railway company for failure to supply cars at another point.

Does the Madden bill provide that only well-known firms, honest and reliable like Brown & Co., can inflict this great loss on the railways? It does not, but states that the carrier must accept orders from "any and all persons or corporations who apply therefor." Not only can Tom, Dick, and Harry place orders for empty cars, refuse them after arrival, and collect the difference in penalties and damages, but these cars must also be placed for loading," at any point that cars are desired." We presume this means on a spur in the wilderness, a flag station, or even the main track if the shipper elects. And the reciprocal feature of this bill is so broad that while the railway company must pay for every day over and above the free time allowed to provide empties, the consignee is exempted from Sundays, national and state holidays, stress of weather, bunching in transit, etc. With reciprocal demurrage in force this western country would prove a bonanza to any shrewd shyster with capital sufficient to buy a few thousand bushels of grain, and brain enough to keep track of railway conditions, ordering and refusing cars at will and pocketing the penalties.

The fourth paragraph in this bill also provides that unless a loaded car makes an average distance of 60 miles a day from point of origin to destination, the road which issued the bill of lading or shipping bill must pay a penalty of $1 a day, and "all actual damages that the owner or consignee or party whose interests may appear, may sustain, including the cost of the court and a reasonable attorney's fee." There are many railways whose earnings on a carload of freight would be less than $10, representing their proportion of the through rate, and yet because they issued the receipt and accepted the freight (compulsorily) and moved the car say 10 miles, they may be compelled to defend themselves before the courts, pay out a large sum as damages and costs of court; their only redress being in turn to sue their connecting line or lines for reimbursement. A truly liberal manner of settlement, compelling the innocent to pay for the crimes of the guilty, and look to the offender for the return of their outlay.

It has been the effort of the people of the United States in years past to prevent rebates and discriminations of this nature, and yet the Madden bill carries with it possibilities of discrimination beyond computation. Fictitious damages could be paid as an inducement for continued business, during slack seasons cars could be loaded and delayed in transit purposely in order to give the semblance of justice to such settlement; empty cars could be ordered with the understanding that they would not be placed for a certain length of time, and the reciprocal demurrage which would then be claimed would represent the difference between the correct tariff toll and the toll agreed upon. Again, the railway companies could not live unless they were prepared to defend themselves against all fictitious claims for damages, etc., under such a bill, and with the hundreds of thousands of shippers and consignees along any trunk line a legal department so greatly in excess of the present requirements would have to be maintained, that the cost of such protection would naturally increase the total cost of operation. This total cost of operation can only be offset in one way, by freight and passenger earnings, and anything which tends to increase operating expenses must result in increased freight and passenger tolls. From the viewpoint of the advocates of this bill, reciprocal demurrage is a case of "Heads I win, tails you lose."

May Birthdays.

Many happy returns of the day to—

W. R. Baker, Assistant to President C.P.R., Montreal, born at York, Eng., May 25, 1852.

S. Barker, M.P., ex-General Manager Northern Ry., Hamilton, Ont., born at Kingston, Ont., May 25, 1839.

C. W. Burpee, Superintendent C.P.R., Brownville Jct., Me., born at Keswick, N.B., May 15, 1861.

G. S. Cantlie, Superintendent Car Service, C.P.R., Montreal, born there May 2, 1867.

M. Donaldson, Superintendent Ottawa Division G.T.R., Ottawa, Ont., born near Edinburgh, Scotland, May 1, 1851.

G. C. Dunn, District Engineer Transcontinental Railway surveys, Fredericton, N.B., born at Quebec, May 13, 1862.

Hon. W. C. Edwards, Temiskaming Steamboat Co., Rockland, Ont., born at Clarence, Ont., May 7, 1844.

J. D. Evans, Engineer Central Ontario Ry., Trenton, Ont., born at Goderich, Ont., May 27, 1843.

T. M. Fallon, City Passenger and Ticket Agent, Rutland Rd., Montreal, born there May 26, 1875.

E. T. Galt, President Alberta Ry. and Irrigation Co., Montreal, born at Sherbrooke, Que , May 24, 1850.

J. R. Gilhula, Trainmaster Pere Marquette Rd., St. Thomas, Ont., born at Chatham, Ont., May 27, 1865.

A. Hardy, General Freight and Passenger Agent, Quebec and Lake St. John Ry., Quebec, born there May 12, 1855.

C. M. Hays, 2nd Vice-President and General Manager G.T.R., and President G.T. Pacific Ry., Montreal, born at Rock Island, Ill., May 16, 1856.

R. B. Hepburn, President and General Manager Ontario and Quebec Navigation Co. Picton, Ont., born there May 27, 1876.

W. T. Huggan, Accountant and Auditor Prince Edward Island Ry., Charlottetown, P.E.I., born at Halifax, N.S., May 24, 1851.

J. Hunter, Chief Engineer Wellington Colliery Co.'s Ry., Nanaimo, B.C., born at Aberdeen, Scotland, May 7, 1839.

W. S. Kinnear, Assistant General Manager Michigan Central Rd., and Chief Engineer Detroit River Tunnel, Detroit, Mich., born at Circleville, Ohio, May 25, 1864.

M Neilson, C.E., Consulting Engineer Montreal Street Ry., born at Almonte, Ont., May 26, 1852.

A. L. Ogilvy, General Purchasing Agent, Transcontinental Railway Commission, Ottawa, Ont., born at Richwood, Oxford County, Ont., May 23, 1868.

G. A. Parker, Auditor Dominion Atlantic Ry , Kentville, N.S., born at Walton, N.S., May 1, 1855.

N. J. Power, Auditor of Disbursements, G.T.R., Montreal, born at Rochester, N.Y., May 19, 1843.

Hayter Reed, Manager-in-Chief C.P.R hotels, Montreal, born at L'Original, Ont., May 26, 1849.

H. B. Sherwood, Superintendent Bay of Quinte Ry., Napanee, Ont., born at Auburn, N.Y., May 25, 1847.

E. Tiffin, General Traffic Manager I.C.R., Moncton, N.B., born at Hamilton, Ont., May 5, 1849.

W. H. Underwood, Assistant General Passenger Agent Michigan Central Rd., Chicago. Ill., born at Rochester, N.Y., May 6, 1858.

Garret Vliet, Assistant Master Mechanic G.T.R., Portland Me., born at Milwaukee, Wis., May 5, 1854.

J. H. Walsh, General Manager Quebec Central Ry., Sherbrooke, Que., born at Quebec, May 12, 1860.

H. K. Wicksteed, Consulting Engineer Mackenzie, Mann & Co., Ltd., Toronto, born at Quebec May 25, 1855.

James Yeo, ex-Roadmaster Intercolonial Ry., Riviere du Loup, Que., born at Bideford, Devonshire, Eng., May 1, 1830.

J. A. Yorick, Canadian Passenger Agent Chicago, Burlington and Quincy Rd., at Toronto, born at London, Ont., May 7, 1872.

Reduction of Passenger Rates.

The following circular was sent Mar. 21 by the Secretary of the Board of Railway Commissioners to the various railway companies operating in Canada east of the Rocky Mountains: "I am directed by the Board to inform you that on Mar. 18, an order was issued by it directing the Grand Trunk and Canadian Pacific Railway Companies to reduce their passenger rates over their lines in Canada east of and including the Calgary and Edmonton Ry. to the basis of 3c. per mile. I am requested to ask whether your company is willing that its standard passenger tariffs should be similarly reduced, and, if not, on what grounds you object to this being done—such reduction to take effect within 60 days from Mar. 18. in order that the passenger tariffs of the companies might be altered and made effective accordingly. The Board desires that you furnish a reply to this communication within ten days after its receipt."

The annual report of J. E. Quick, General Baggage Agent, G.T.R., shows that during 1906, there were forwarded and received on the system, 6,278,914 pieces of baggage, against 5,514,328 in 1905. During the year 11,070 corpses were carried on the company's trains against 10,281 in 1905.

The Locomotive and Machine Company of Montreal, Limited

IMPERIAL BANK BUILDING, VICTORIA SQUARE, MONTREAL, CANADA

Builders of Locomotives for all Classes of Service

Structural Steel

—FOR—

BRIDGES, BUILDINGS, ROOF TRUSSES, ETC.

NEW YORK OFFICE:
American Locomotive Company,
111 Broadway

LONDON OFFICE:
Alfred Davis, 26 Victoria Street,
Westminster, S.W.

Railway Advertising.

By H. R. Charlton, Advertising Agent, G.T.R.

It has been truly said by one of the most eminent men of the age that "Advertising is to business what steam is to machinery—the great propelling power." In the railway world, to meet with success from the results of advertising, four things are essentially necessary: A thorough knowledge of the field of mediums that will best reach the people, money to spend for the purpose, the nerve to spend it, and the good judgment exercised in the investment.

Railway advertising is totally different to any other class of publicity, and it cannot be compared to the advertising of, say, ordinary trade and commerce. It is a specialty. There is a certain dignity which must be pre-eminent in the preparation of copy, the composition of the type matter, the artistic lay-out of the magazine advertisement, of the compilation and general get-up of a booklet, with the one main object of reaching and hitting the mark, not only among one class of the community, but to influence the minds of people in all spheres of life. In other ways it is not unlike ordinary commercial publicity, in that the copy must be truthful, concise and to the point, and that what is being exploited is something that the author or promoter is thoroughly conversant with and knows is a good thing, and, further, that the goods can be delivered when called for and just as they have been made known.

In explaining more clearly, the mail order feature of a large departmental store may be used as a simile. In this, the business is secured very largely through catalogue advertising, and the customers are numbered in all parts of the country. Unless the goods purchased in this way were absolutely up to the standard advertised, and the purchasers were satisfied with the merchandise when received, it would be a poor policy indeed to expend any amount of money in their advertising. Though the business no doubt would be large for a certain length of time, people would not be fooled more than once, and the reaction would be disastrous to the strongest concern. So is it with the railway whose desire it is to make known its attractions. It must be done accurately, and without getting away from facts and conditions that are actually to be found when the traffic is secured. If a railway is advertising magnificent equipment, velvet running roadbed, exquisite scenery, unexcelled fishing and hunting, or any other attractions that may be found contiguous to its line, and cannot substantiate its statements, the money expended in such advertising would be worse than utter waste, for it would reveal a fallacy of the worst kind, and would prove a greater detriment to the road than if the matter had been left entirely alone. It is therefore obvious that unless a railway is up-to-date in every department of its management, and can offer the public exactly what it announces, the advertising department would be the fifth wheel to the coach, and a hindrance instead of the great help it is to the company in bringing grist to the mill, and thereby increasing the revenue through the passenger department.

Take, for instance, our Canadian railways, which have the vastness of the north and west to exploit, and whose areas cover thousands of square miles of virgin territory that offer homes to the settler, and whose forests and streams are a veritable paradise for sportsmen. Although our country is rich in its endowment of all such attractions, only a small percentage of its resources has as yet been brought formally to notice. Proper information can only be obtained by special trips into the unexplored parts, and the securing of the necessary data which experience dictates will aid the advertising department in putting it into such shape as will appeal to the general public, and explaining to those who are desirous of getting away from the beaten path and visiting the trackless areas how they should divorce the strenuous life and glut of business activities for the pleasures awaiting them in God's-out-of-doors among Nature's unadorned solitudes.

This feature of railway advertising, the bringing of our country into such prominent notice, is one of great importance, and during the past few years it has been developed to a large extent by one at least of our great Canadian railway systems whose lines reach the finest summer resort districts and fishing and hunting confines in America, viz., the Highlands of Ontario. As an object lesson in this class of advertising, I might cite an instance of what has been accomplished by this railway company during a period of ten years of systematic and progressive advertising. Ten years ago very little was known and very little had been done in making known this wonderful territory of the Province of Ontario; in fact, scarcely anything was known of the inexhaustible resources which were awaiting the opening up of this wonderful region. It was then decided that a vigorous policy of advertising should be inaugurated, and the thousands who were looking for just such information made aware of the attractions that were within easy reach. This campaign was well thought out and systematically executed, with the result that during this period of ten years the traffic increased each year in leaps and bounds. Largely through the means of judicious advertising, there was an increase of over 330% in the year 1906, when compared with 1896, in the passengers carried to the Highlands of Ontario. A special feature which will demonstrate the value of such traffic to the community resident in this vast territory, and the Province itself, may be cited here. Estimating conservatively the amount of money left by each tourist or sportsman in this particular district, and with the present reasonable assumption that the number of summer visitors from across the International border amounts to 75% of the total, the amount of money left in this portion of Ontario through this traffic in 1896 was over $600,000, while in 1906 it would amount to nearly $2,000,000. This refers to but one section of the Province, and is given simply as an instance of the value of railway advertising, not merely to the railway itself but to the community generally. Each successive year sees this great army of travellers increasing, helped on without doubt by the distribution throughout this continent of the many publications of the railway, and now greatly assisted by the dissemination of personal information, and experience of the thousands of satisfied visitors who return to their homes and tell of the delights and pleasures that may be found in these parts.

This feature of advertising, that of friend to friend, is probably the most convincing one. It is generally of a quality which causes others to accept a statement without question, and it is largely furthered when art, optimism, and accuracy are combined in the railway company's printed prospectuses. The living voice that can inspire with legitimate enthusiasm, the living man who can be catechised face to face in order to correct exaggerated enthusiasm, will best so read the story of the advantages which the railway company first seeks to faithfully exploit through its printed pages.

This general statement regarding the financial value of tourist travel induced by judicious advertising is demonstrated in other countries also. Take, for example, Switzerland, a country whose physical features preclude general agricultural development, but whose natural attractions appeal to the globe-trotter or tourist. Each year some 30,000,000 francs are left within the confines of Switzerland's borders by travellers, and the bulk of the entire population is practically dependent on this revenue for their sustenance. An example nearer home may be cited in the revenue derived by the people of the State of Maine, our near neighbors. It is estimated that each year $20,000,000 are spent in the State by the floating population of sportsmen and tourists who annually visit that domain.

The principal mediums used by the railways for bringing the excellence of their service and equipment into notice, as well as for exploiting their resources, are the daily and weekly press and the magazines, supplemented by many publications issued by themselves, which are necessary in order to give more detailed information. The newspapers and magazines create the demand for information, and bring the prospective traveller into touch with the railway which, through the advertising department, or its passenger representative, sends the enquiring one such of the publications as may be desired, or provides him with supplementary information that will help him to decide certain details of his prospective trip.

The railway publications to-day are an intellectual revelation when compared with those which were issued in the earlier part of the last decade. Some of the railways very properly recognize that if a thing is worth doing at all it is worth doing well, and the cheaply printed booklet for first-class passenger business is a thing of the past. The production of such stuff is practically a waste of money, for it is simply a creature of the moment. To-day we find the railway literature, by reason of its authenticity, in demand for educational purposes in many of the schools, and, instead of copies being simply glanced at and scrapheaped, the recipients preserve them in the study, on the library shelves, or in the home generally, and peruse them at their leisure. The reason for this is their attractiveness. Instead of the old style custom of wood-cut illustrations or reproductions from pen and ink sketches or wash drawings, the booklets and folders are now embellished with reproductions from direct photographs, beautifully printed on high-grade papers, and so gotten up that they cannot fail to appeal to the artistic taste.

Some there are who think that art in its general sense is beyond the comprehension of the masses, and that to understand its treasures one must be of high birth, wealthy or of specially cultured training. The gift of æsthetic emotion may be denied to some, but not because they belong to humble ranks, or have not enjoyed a liberal education. A prominent litterateur once said that, "The aims of art are accuracy of knowledge, delicacy of feeling, and the world's emancipation of vulgarity. Art may possibly be—is very likely to be—above us; it can never be beneath us." The majority of people can therefore be delightfully impressed with a beautifully printed booklet. It is one of the essential features of the preparation of any printed matter not to lose sight of the democracy of art, and to ever keep the artistic sense in view when designing and laying out one's printed matter. Illustrations are probably the most attractive portion of a railway booklet, and the larger they can be reproduced to conform to the space at disposal the more valuable the advertising piece becomes. The text matter is subordinate to these illus-

RAILROAD STEAM SHOVELS

WE HAVE IN STOCK FOUR 70 TON

"BUCYRUS" SHOVELS

READY FOR IMMEDIATE DELIVERY

FAST
STRONG
RELIABLE

BUCYRUS

MADE
IN
CANADA

CANADA FOUNDRY COMPANY, LIMITED

Head Office and Works: TORONTO, ONT.

District Offices: MONTREAL HALIFAX OTTAWA WINNIPEG VANCOUVER ROSSLAND

trations, but embodies, however, all the essential features and facts of the subject dealt with, and which should be conveyed to the reader in a concise and intelligent manner.

Photography occupies a very prominent part in the successful advertising of a railway, and a great deal depends upon "the man behind the camera." That is where the photographer's skill as an artist comes in. It requires something more than pressing the button and leaving some one else to do the work. It requires an intuitive knowledge of what is really artistic in nature and of after effect in his selection of beauty spots and other natural charms, and their value to the prospective traveller. Large sums of money are expended in this branch of advertising, and with good results, especially with the travelling picture exhibits that one Canadian railway has toured the country with, from the Gulf of Mexico to the Great Lakes, and from the Mississippi Valley to the Atlantic Ocean. This feature of advertising was inaugurated some eight or nine years ago. The special car in which this particular exhibit was installed last year was a very handsome one, the interior being fitted with bromide enlargements from direct negatives of scenes in the various summer resorts and fishing and hunting districts reached by the railway. The car was in charge of a competent representative, well versed in all the attractions that are found in the several territories advertised, and he was consequently in a position to give any detail of information that might be requested. This car visited 80 of the principal cities and towns in the States of Louisiana, Mississippi, Alabama, Tennessee, Kentucky, Illinois, Indiana, Ohio, Pennsylvania, New York, and Michigan, and through the Province of Ontario. The number of visitors who viewed this exhibit of pictures and received copies of the illustrated publications totalled nearly 100,000. Advertising of this class is bound to bring good results, perhaps not in a great degree immediately, but it is sure to come. It is an object lesson that leaves a lasting impression on the mind, one that will develop when the question of travel is under consideration. Many advertisers who do not get immediate results become disheartened after a brief campaign, and lose all faith in advertising. They do not take into consideration the cumulative effect of publicity. To demonstrate the theory of cumulative advertising, an instance might be cited in the development of the business of a commercial firm, which took several years of a vigorous advertising campaign before anticipated results were shown by increased sales. The record of sales is as follows: 1899, $20,000; 1900, $20,000; 1901, $20,000; 1905, $1,200,000. Increase of sales in seven years, 6,000%. With railway advertising it is almost impossible to estimate just how much revenue one particular advertisement has brought. But, from the passenger traffic returns for the year, it can be estimated how effective a year's advertising has been in stimulating business.

The main point in preparing advertising copy for magazines is to make it convincing, then to get it into the most artistic shape with the space at one's command, say, half or full page. When once an advertising agent is thoroughly satisfied with the finished proof, then the definition as given of the word iteration should be followed, and the advertisement repeated as often as can be done and in as many magazines or other publications as the appropriation will cover, being careful of course in choosing the mediums. This applies to the announcements of special features which will run for several months. The principle of iteration, of regular repetition, is of more importance than space.

In railway advertising there is one circumstance that seems somewhat unique, viz., that in spite of all the publicity given to the passenger department, the freight service is left to take care of itself. Would it not pay as well in that department as in the passenger department? This question does not seem to have been given much consideration by freight traffic men, probably due to the fact that in the past the freight service has benefited by the advertising done by the passenger department, but it is only reasonable to believe that proper advertising in regard to freight matters may, in the near future, be a substantial factor in the railway's whole general scheme of publicity. Advertising agents tell about palatial limiteds, about low rates on tourist business, and about everything calculated to induce people to travel. They have not as yet, however, told about fast through freight trains, about the railway's facilities for handling business, or about the number of trains offered each day to the shipper. These points, unfortunately perhaps, have been left for the shippers to find out in their own way. A railway may reduce a freight rate, but the general public never hears about it in the newspapers, only those immediately concerned know about it. It may, however, discover or create a new tourist resort on its line, and the black type is at once pressed into service. The pages of the newspapers metaphorically shout loud and strong the wonders and attractiveness of National Parks, the Great Lakes, and Southern winter resorts. Folders, posters, and booklets supplement the newspaper advertising, but whoever saw a folder advertising the freight service of a railroad?

The foregoing paper was read before the Canadian Railway Club recently.

Victoria Rolling Stock Co. of Ontario.

The annual report for the year ended Feb. 15, 1907, states that during the year the company did not issue any new debentures, and outstanding debentures against leases were reduced by $445,000. All payments on leases which matured during the year were promptly met. The final payment under lease of May 15, 1896, to the C.P.R. Co. matured during the year, and conveyance of the rolling stock included in the lease was executed. The directors wrote off discount and commission account $20,000, leaving $36,000 still to be dealt with. The profit on the year's business, after charging up directors' fees, expense account, and $20,000.00 for discount and commission on debentures sold, was $20,874.42; out of which a dividend of 12% per annum on the paid-up capital stock, amounting to $14,400, was paid. W. Hendrie, President, and T. G. Brough, a director, died during the year. Hon. John S. Hendrie was elected a director to fill the vacancy on the board caused by W. Hendrie's death, and the directors submitted a by-law reducing the number of directors from eight to seven.

ASSETS.

Obligations on leases	$2,395,545.84
Debentures held by company and accrued interest	254,221.39
Discount and commission on series S debentures	36,000.00
Cash in bank	6,363.22
	$2,692,130.45

LIABILITIES.

Capital stock subscribed.. $600,000.00	
do. paid up	$ 120,000.00
Debentures outstanding	2,433,000.00
Interest accrued on same	24,708.21
Coupons due and not presented	40.00
Balance at credit profit and loss	114,382.24
	$2,692,130.45

PROFIT AND LOSS ACCOUNT.

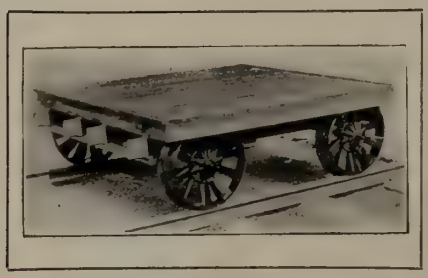
Interest paid and accrued on debentures and advances	$114,413.27
Discount and commission on debentures sold, series S	20,000.00
Expense account	1,081.99
Directors' fees last year	1,400.00
Dividend account	14,400.00
Balance carried forward	114,382.24
	$265,677.50
Balance at credit profit and loss account, Feb. 15, 1906	$107,907.82
Rents received and accrued on leases and interest on debentures held by Company	157,769.68
	$265,677.50
Original cost of rolling stock held under existing leases	$5,846,718.03
Amount paid in on account by railway companies in addition to interest	3,414,305.70
	$2,432,412.33
Total amount of company's debentures outstanding	$2,433,000.00

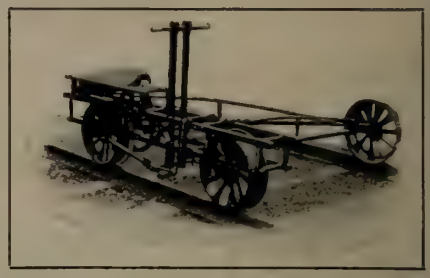
The directors for the current year are: President, E. B. Osler; Vice-President, W. D. Matthews; Managing Director, H. C. Hammond; other directors: D. Coulson, Hon. J. S. Hendrie, H. Pellatt, D. R. Wilkie.

Free Scholarships Offered by G.T.R.

Two free scholarships covering four years' tuition in the Faculty of Applied Science of McGill University, Montreal, are offered by the G.T.R. Co., subject to competitive examinations, to apprentices and other employes of the company under 21 years of age, and to minor sons of employes on lines east of Detroit and St. Clair rivers. The competitive examinations, which will be the regular entrance matriculation examination provided for in the annual calendar of the University, will be held at the university and at other centres, beginning June 12. The two candidates making the highest average and complying with the requirements of admission will be awarded the scholarships and have the option of taking a course in any department of the Faculty of Applied Science. Scholarships will be renewed from year to year only upon the holders thereof passing satisfactorily the sessional and other examinations prescribed by the faculty. In consideration of the free scholarships, students will be required to enter the company's service as student apprentices, and serve during vacation periods while in attendance at the university, and at the option of the company, for two years after completing the college course. Successful candidates will, before entering the university, be required to execute the company's regular form of student apprentice contract, copies of which can be obtained upon application to R. S. Logan, Assistant to Second Vice-President, Montreal, to whom, also, applications for certificates entitling eligible persons to enter the competition should be addressed. Copies of the Annual Calendar containing the conditions of admission and announcement of courses may be obtained upon application to J. A. Nicholson, Registrar, McGill University, Montreal. The college will re-open for the session of 1907-1908 on Sept. 18.

J. H. McKnight Construction Co. has been incorporated under the Ontario Companies' Act, with a capital of $40,000 and offices at Toronto, to carry on a general contracting business, including the construction of railways, bridges, etc.; to buy and sell material required in the carrying out of such contracts, and to have all necessary incidental powers. The provisional directors are: J. H. McKnight, contractor; Jas. Shields, foreman; W. E. Douglas, civil engineer; Mrs. L. E. McKnight, of Toronto; and L. Carabone, foreman, Sault Ste. Marie, Ont.





WE CARRY IN STOCK
a complete line of
appliances for railway
construction and mainten-
ance, including

HAND CARS - PUSH CARS - VELOCIPEDES - GAUGES

TRACK DRILLS - JACKS - LEVELS - RAIL BENDERS

ETC., ETC., ETC.

Quality is guaranteed first-class

Catalog mailed on application

F·H·Hopkins & Co Montreal

"HART" CONVERTIBLE CARS

Our Cars are not an Experiment. **Over 25,000 in actual service.**

Hart Convertible Cars have been in successful operation for the last four years on many of the leading railroads and during that time have been working under exceptionally hard conditions. This year we offer a car stronger in every way than heretofore produced, and guaranteed to stand up under the hardest steam shovel work and general road service.

GONDOLA—FLAT—BOX AND STOCK CARS ARE CONVERTED INTO SELF-CLEANING HOPPERS

Write for full Particulars

Dominion Dump Car Co. Limited

IMPERIAL BANK CHAMBERS, MONTREAL

Our Reference Book sent free on request

Locomotive Tests at St. Louis Exposition.

By H. H. Vaughan, Assistant to Vice-President C.P.R.

The tests carried out by the Pennsylvania Rd. at the St. Louis Exposition have been so thoroughly described in the technical press that it would be superfluous now to go into a description of them in detail, and it will be sufficient to briefly state the general arrangement of the apparatus employed and the scope of the experiments. The testing plant, which is a development of that in use for several years at Purdue University, comprises a series of supporting wheels, on which the driving wheels of the locomotive are placed, each pair being equipped with a set of Alden brakes. These brakes consist of discs, which rotate with the driving shaft, and diaphragms of copper, which are attached to a stationary casing, and which can be pressed against the discs when water is admitted under pressure to the casing. The discs, where pressed against the diaphragms, are well lubricated and the retardation is furnished by the viscosity of the oil under the pressure caused by the water, which also serves to carry away the heat that is generated. As the water pressure in the casings depends on the rate at which water is admitted, this type of brake allows the resistance to be easily and accurately regulated by adjusting the valves controlling the supply of water, and in carrying out a test this is done by hand to obtain a practically constant speed. As the supporting wheels are thus braked to control the driving wheels at a given speed, the power transmitted to them tends to move the engine forward on them exactly as it would do on a rail, and this movement is prevented by the attachment of the engine draw-bar to a stationary dynamometer, which thus measures the pull or tractive power developed. This dynamometer is a very highly-developed type of weighing machine, and is arranged to allow the engine to be adjusted so that the driving wheels are exactly over the supporting wheels, and the force developed by the engine is thus measured with considerable accuracy. The apparatus thus briefly described is actually exceedingly complicated and beautifully designed, but a detailed description of it would occupy a large amount of time, and those interested must be referred to the volume published by the Pennsylvania Rd., in which it is fully described and illustrated, and in which complete reports of the elaborate methods employed in carrying out the tests, the data obtained, and a general discussion of the results are given in full. It will be sufficient for the present to say that the greatest care was taken to obtain complete experimental results, and every known precaution was taken to ensure their accuracy.

In obtaining the locomotives to be tested, the original idea was to select those that would allow comparisons to be drawn on several features of locomotive design, as, for instance, to test one engine with piston valves and another with flat valves, one with wide fire-box and one with narrow, one simple and one compound, one with long flues and one with short, but partly on account of difficulties experienced in getting the plant into satisfactory running order, and partly on account of the large amount of interest aroused by the balanced compound passenger locomotive, this programme was not entirely carried out. A statement of the locomotives actually tested shows, however, that it was adhered to sufficiently to enable several interesting comparisons to be drawn: (See table in columns 2 and 3).

The object of the tests was, however, not primarily to determine the effect of various elements in the designs, since, while perhaps such experiments might be of greater actual value than those carried out, they would not have permitted the testing plant to perform its part as a coherent portion of a great exposition. For instance, to test the relative merits of piston and slide valves, the ideal method would be to test two engines identical in all respects with the exception of the valves. Such a test would, however, have nothing to do with the merits of the engines as a whole, whereas tests of the engines as a whole, while only testing constructive variations, incidentally accomplished the purpose of a criticism on the locomotives exhibited, ascertaining their capacity, their economy, and in general the degree of perfection with which they fulfilled their constructors' aim, and the function of the testing plant as a portion of an exposition was thus attained by its serving as an accurate and impartial judge. There have been at least two excellent reviews published of the general results obtained; the first in P.R.R. report, chap. 21, and the second by Prof. W. F. M. Goss, in a pamphlet issued by the American Locomotive Co. The P.R.R. report also contains a summary of the conclusions, which will be given in this paper, as they are of the greatest value to all interested in locomotive operation; these conclusions are as follows:

Road	Eng. No.	Type	Simple or Compound	Valves	Fire Box	Service	Grate Area	Heating Surface
P.R.R.	149	2- 8-0	Simple	Slide	Wide	Freight	49.2	2482
L.S. & M.S.	734	2- 8-0	Simple	Slide	Narrow	"	33.7	2541
M.C.R.	585	2- 8-0	2-cyl. cpd.	H.P. Piston L. P. Slide	Wide	"	49.4	2819
A.T & S.F.	929	2-10-2	Tandem Compound	Piston	Wide	"	58.4	4306
A.T. & S.F.	535	4- 4-2	Vauclain 4-cyl. Bal.	Piston	Wide	Passenger	48.4	2902
Hanover Loco. Wks.	628	4- 4-2	Hanover 4-cyl.Bal.	H.P. Piston L.P. Slide	Wide	"	29.1	1753
N.Y.C. & H.R.	3000	4- 4-2	Cote 4-cyl. Balanced	Piston	Wide	"	49.9	3000
P.R.R.	2512	4- 4-2	De Glehn 4-cyl. Bat.	Slide	Narrow	"	33.4	2656

BOILER PERFORMANCE.—Contrary to a common assumption, the results show that when forced to a maximum power, the large boilers delivered as much steam per unit area of heating surface as the small ones.

At maximum power, a majority of the boilers tested delivered 12 or more pounds of steam per sq. ft. of heating surface per hour; two delivered more than 14 lbs.; and one, the second in point of size, delivered 16.3 lbs. These values, expressed in terms of boiler-house power per sq. ft. of heating surface, are 0.34, 0.40, and 0.47 respectively.

The two boilers holding the first and second place with respect to weight of steam delivered per sq. ft. of heating surface are those of passenger locomotives.

The quality of steam delivered by the boilers of locomotives under constant conditions of operation is high, varying somewhat with different locomotives and with changes in the amount of power developed, between the limits of 98.3 and 99.0%.

The evaporative efficiency is generally maximum when the power delivered is least. Under conditions of maximum efficiency, most of the boilers tested evaporated between 10 and 12 lbs. of water per pound of dry coal. The efficiency falls as the rate of evaporation increases. When the power developed is greatest, its value commonly lies between limits of 6 and 8 lbs. of water per pound of dry coal.

The observed temperature of the fire-box under low rates of combustion lies between the limits of 1,400 and 2,000 degrees F., depending apparently upon characteristics of the locomotive. As the rate of combustion is increased, the temperature slowly increases, maximum values generally lying between the limits of 2,100 and 2,300 degrees F.

The smoke-box temperature for all boilers, when worked at light power, is not far from 500 degrees F. As the power is increased, the temperature rises, the maximum value depending upon the extent to which the boiler is forced. For the locomotives tested it lies in most cases between 600 and 700 degrees.

With reference to grate area, the results prove beyond question that the furnace losses due to excess air are not increased by increasing the area. In general, it appears that the boilers for which the ratio of grate surface to heating surface is largest are those of greatest capacity.

A brick arch in the fire-box results in some increase in furnace temperature and improves the combustion of the gases.

The loss of heat through imperfect combustion is in most cases small, except as represented by the discharge from the stack of solid particles of fuel.

Relatively large fire-box heating surface appears to give no advantage either with reference to capacity or efficiency. The fact seems to be that the tube heating surface is capable of absorbing such heat as may not be taken up by the fire-box.

The value of the Serve tube over the plain tube of the same outside diameter, either as a means for increasing capacity or efficiency, was not definitely determined.

The draft in the front end for any given rate of combustion, as measured in inches of water, depends upon the proportions of the locomotive and the thickness and the condition of the fire. Under light power, its value may not exceed an inch, but it increases rapidly as the power is increased. Representative maximum values derived from the tests lie between the limits of 5 and 8.8 inches.

Insufficient openings in the ash-pan and the mechanism of the front-end, especially the diaphragm, are shown by the tests to lead to the dissipation of considerable portions of the draft force.

THE ENGINE.—The indicated horse power of the modern simple freight locomotive tested may be as great at 1,000 or 1,100; that of a modern compound passenger locomotive may exceed 1,600 h.p.

The maximum indicated horse power per sq. ft. of grate surface lies, for the freight locomotives, between the limits of 31.2 and 21.1; for the passenger locomotives, between the limits of 33.5 and 28.1.

The steam consumption per indicated horse power hour necessarily depends upon the conditions of speed and cut-off. For the simple freight locomotives tested, the average minimum is 23.7. The consumption when developing maximum power is 23.8, and when under those conditions which proved to be the least efficient, 29.0.

The compound locomotives tested, using saturated steam, consumed from 18.6 to 27 lbs. of steam per indicated horse power hour. Aided by a superheater, the minimum consumption is reduced to 16.6 lbs. of superheated steam per hour.

In general, the steam consumption of simple locomotives decreases with increase of speed, while that of the compound locomotive increases. From this statement it

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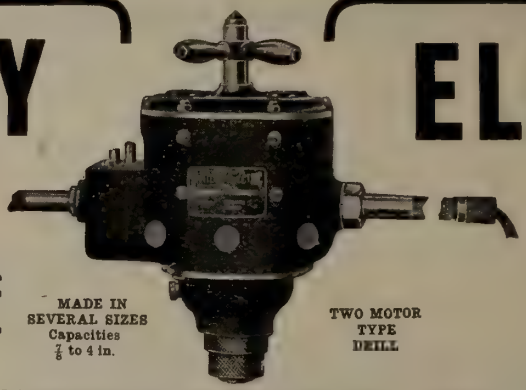

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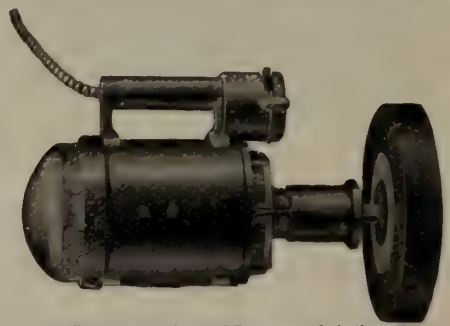

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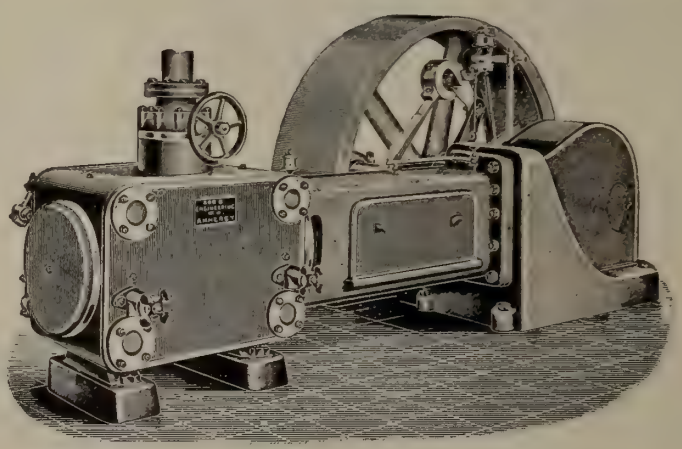

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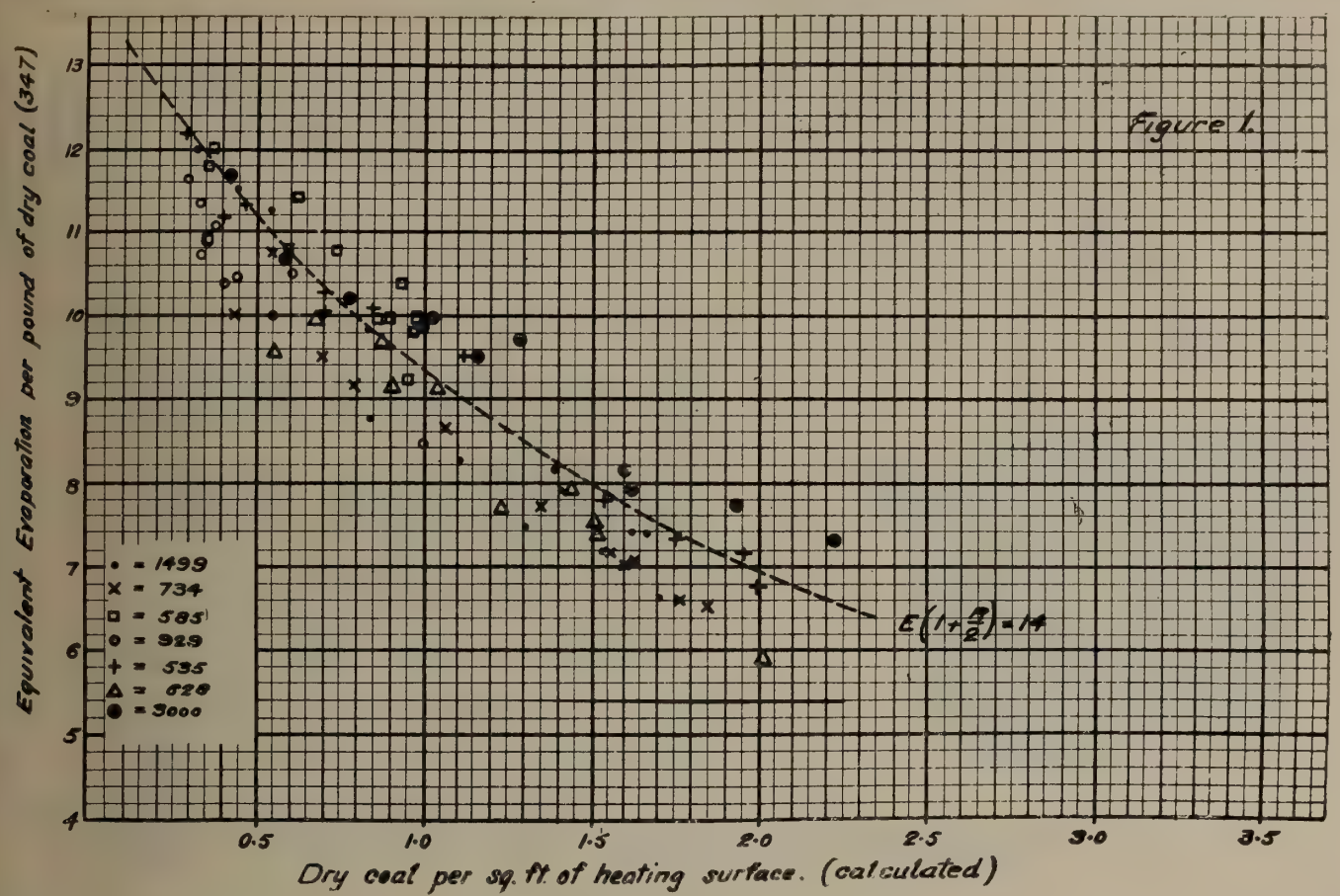

appears that the relative advantages to be derived from the use of the compound diminish as the speed is increased.

Tests under a partially opened throttle show when the degree of throttling is slight the effect is not appreciable. When the degree of throttling is more pronounced the performance is less satisfactory than when carrying the same load with a full throttle and a shorter cut-off.

THE LOCOMOTIVE AS A WHOLE.—The percentage of the cylinder power which appears as a stress in the draw-bar diminishes with increase of speed. At 40 revolutions a minute, the maximum is 94 and the minimum 77; at 280 revolutions a minute, the maximum is 87 and the minimum 62.

The loss of power between the cylinder and draw-bar is greatly affected by the character of the lubricant. It appears from the tests that the substitution of grease for oil upon axles and crank pins increases the machine friction from 75 to 100%.

The coal consumption per dynamometer horse power hour, for the simple freight locomotives tested, is at low speeds not less than 3.5 lbs., nor more than 4.5 lbs., the value varying with running conditions. At the highest speeds covered by the tests the coal consumption for the simple locomotives increased to more than 5 lbs.

The coal consumption per dynamometer horse power hour, for the compound freight locomotives tested, is, for low speeds, between 2.0 and 3.7 lbs. Results at higher speeds were obtained only from a two-cylinder compound, the efficiency of which, under all conditions, is shown to be very high. The coal consumption per dynamometer horse power hour for this locomotive at the higher speeds increases from 3.2 to 3.6 lbs.

The coal consumption per dynamometer horse power hour for the four compound passenger locomotives tested varies from 2.2 to more than 5 lbs. per hour, depending upon the running conditions. In the case of all these locomotives, the consumption ncreases rapidly as the speed is increased.

A comparison of the performance of the compound freight locomotives with that of the simple freight locomotives is very favorable to the compounds. For a given amount of power at the draw-bar, the poorest compound shows a saving in coal over the best simple, which will average above 10%, while the best compound shows a saving over the poorest simple, which is not far from 40%. It should be remembered, however, that the conditions of the tests, which provide for the continuous operation of the locomotives at constant speed and load throughout the period covered by the observations, are all favorable to the compound.

It is a fact of more than ordinary significance that a steam locomotive is capable of delivering a horse power at the drawbar upon the consumption of but a trifle more than 2 lbs. of coal per hour. This fact gives the locomotive high rank as a steam power plant.

It is worthy of mention that the coal consumption per horse power hour developed at the draw-bar by the different locomotives tested presents marked differences. Some of these are easily explained from a consideration of the characteristics of the locomotives involved. Where the data is not sufficient to permit the assignment of a definite cause, there can be no doubt but that an extension of the study already made will serve to reveal it.

The above conclusions are evidently quite extensive in themselves, and I have neither the knowledge nor the time to discuss them in detail. They form an immensely valuable statement of results of locomotive tests, and have only been obtained at a very great cost, both of money and time. Certain of them have, however, had a peculiar interest to me, and will probably also appeal to other students of the locomotive on account of their application to problems which have occurred in our daily work. These and some results of individual tests I will now refer to in detail. The results on European and American locomotives are interesting on account of the general impression that our engines are not as economical, either on account of their use of copper fire-boxes, or for other seasons. While there were only two foreign engines tested, both were of modern types. Of these, one, no. 628, was the only locomotive tested equipped with a superheater, and its engine gave, as might be expected, the most economical results, but the performance, as a whole was not superior to that of either 535 or 3,000, the American balanced compounds, except at 80 RPM, at which speed both it and 2512, the De Glehn compound, showed the best results. At higher speeds the American engines were fully equal to their competitors, and their maximum capacity was almost double, dependent of course, on the fact that they were of much larger size. As both these engines were balanced compounds, no comparison could, of course, be drawn between the performance of European and American simple engines, but one thing was definitely shown that the copper fire-box has no evaporative advantage over the steel, and this of itself is important.

In comparing simple and compound locomotives, which was only done directly on the freight engines, the results are not entirely satisfactory. The two simple engines showed the interesting result that they required 39% more steam per 1 h.p. hour at 40 revolutions, 26% at 80 revolutions, and 6½% at 160 revolutions, these speeds on a 57-in. wheel equalling 7½, 15, and 30 miles per hour respectively, thus confirming the experience that with steady work and low speeds the compound shows an advantage that is lost when a considerable proportion of the time the speed is high. On the other hand, the passenger four cylinder compounds showed a good

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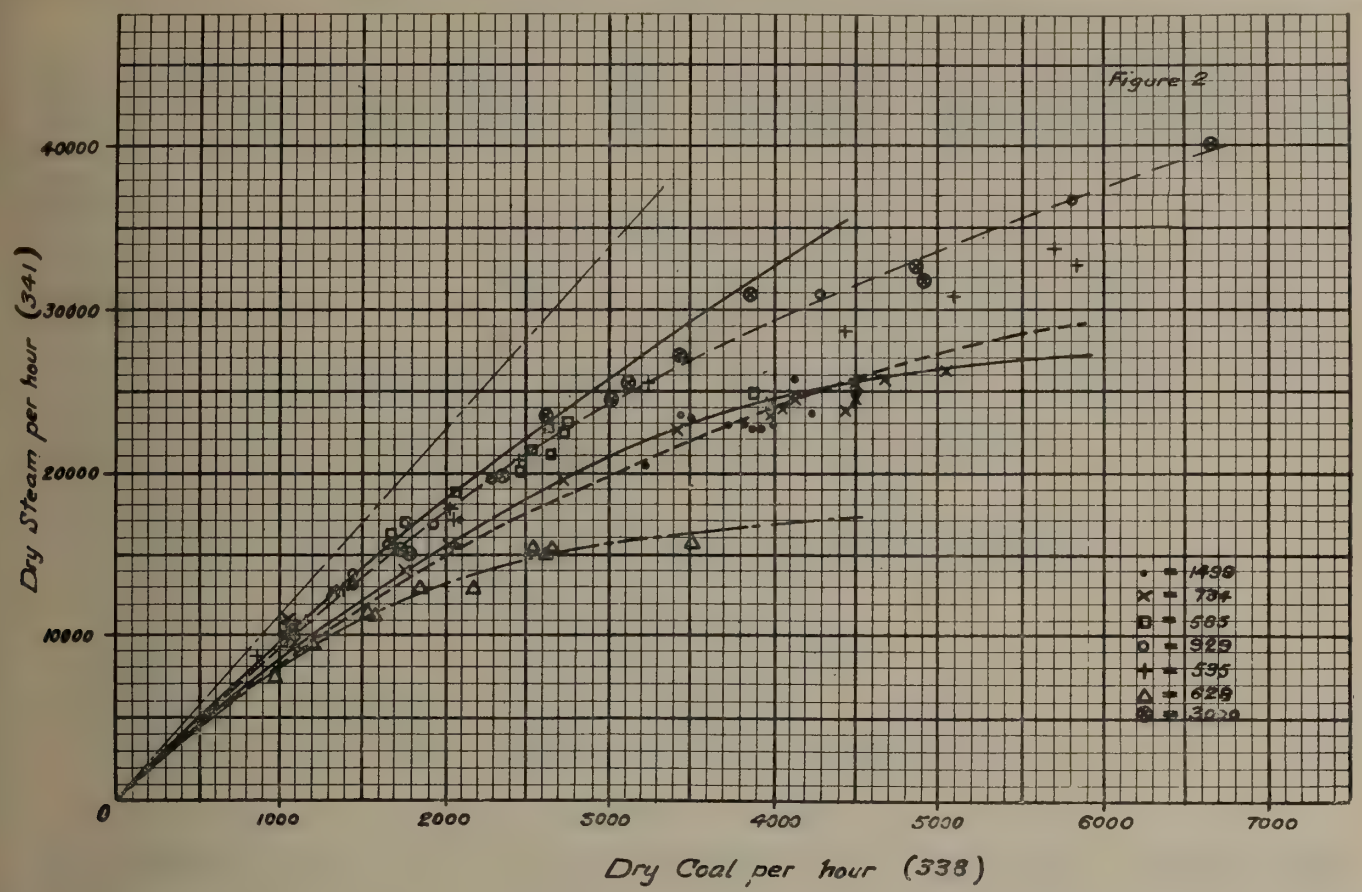

performance at the highest speed tested, no. 535 only taking 20½ lbs. of water per 1 h.p. hour at 240 revolutions when indicating 1,550 h.p. It is possible, therefore, that the loss of economy on the compound freight locomotive with increase of speed is to a certain extent a matter of design, but the locomotives as tested certainly exhibited the same characteristics as our own.

None of the tests made involved any comparison between slide and piston valves as, contrary to the intentions of the committee, both simple freight engines were equipped with D slide valves. The comparison of these results is, however, interesting, as 1499 was slightly but uniformly superior on the basis of the steam consumption per indicated h.p. hour, the average results being:

Engine	734	1499	Gain
40-20-F	29.56	28.33	4.35 per cent.
40-30-F	27.78	27.20	1.8 per cent.
80-20-F	25.89	25.51	1.5 per cent.
80-30-F	24.55	23.92	2.6 per cent.
160-30-F	25.11	24.78	1.3 per cent.
160-30 F	25.53	24.0	6.4 per cent.

In investigating the reason for this difference it will be found that in 1499 the clearance is 11.4%, in 734 9.26%, in 1499 the valve is of the plain balanced type, in 734 the double ported balance, and that the motion of 734 is considerably superior in its setting to that of 1499, the points of cut-off, release, and compression all being far better equalized in the former, and yet with all these points in its favor the performance is inferior. The explanation lies in the back pressure, which is 1 to 2 lbs. greater on 734, and looking into this further the cause is found to lie in the type of self-cleaning front-end with which 734 is equipped. In 734, to obtain 1-in. draft between the fire-box and ash-pan, the total draft required was 5.8 in., of which 3 ins. was required to pass the gases below the diaphragm, while in 1499, 5.3 in. was needed, and this would have been reduced to 3.3 had it not been for the openings in the ash-pan on this engine, which were considerably too small. This example is interesting on two accounts, it shows the difficulty that is frequently experienced in intelligently explaining the many results obtained, and it is a useful object-lesson as to the necessity of following all and not only a few of the many factors that together make for economy or waste on a locomotive.

Our knowledge of the efficiency with which coal is burned in a locomotive fire-box was added to, but, unfortunately, the results are to a great extent involved, and on one account unsatisfactory. The apparatus designed to catch the sparks issuing from the stack did not work properly. The cinders retained in the front-ends of the locomotives tested and caught by the deflector in the stack weighed 53,500 lbs., while those which escaped and fell on the roof were estimated to weigh 97,000 lbs., a total of 75 tons. During the entire series about 750 tons of coal were burnt, so that the cinders and sparks amounted to about 10%. Of this 750 tons, however, only 290 were burnt during complete and recorded tests, and while the average rate at which coal was burnt on these tests was 61 lbs. per sq. ft. of grate per hour, it would be guesswork to assume that 10% represented the spark loss at this rate of combustion, and as a matter of fact it is really impossible to draw any conclusions on this important source of loss from the experiments.

Apart from the spark loss, which is itself dependent on the coal burnt per sq. ft. per hour, and is, therefore, one of the losses most affected by uneven and poor firing, other losses in a fire-box are those arising from excess air, imperfect combustion, and shaking of good coal into the ash-pan; the loss that also occurs in road service from poor firing, that due to heavily banked fires at the end of a run, is not a factor in tests of this nature. The loss in the ash-pan was not measured, as the coal was very carefully analyzed, and it was thought to be unnecessary, but I now regret that this was not done as a measure of the efficiency of the grates.

The other losses, excess air, and incomplete combustion, were thoroughly ascertained, but the data relating to the former have not, I believe, been thoroughly studied as yet. The loss from imperfect combustion, which practically means the formation of CO in place of CO_2, has been carefully gone into, with the result that it is found to increase with the amount of coal burnt, but varies considerably with different engines. For instance, at 80 lbs. per sq. ft. the loss was 16% in 1499, 8% in 628, 1% in 2512 and 535, and ½% in 734 and 3000. The cause of this difference is not so clear, but is ascribed in the P.R.R. conclusions largely to the pressure or absence of a brick arch, the former probably causing a higher fire-box temperature, which should decrease the percentage of CO. This conclusion is questionable. At 80 lbs. per sq. ft., 628 and 3000, the best and the worst but one, showed practically the same fire-box temperatures, while 1499, the worst, is also high, and 2512, which showed very little CO, is low in temperature. It must be remembered, however, that the fire-box temperature is only taken at one point, and does not in all probability represent the average of the entire box, and I believe the explanation of the difference to be that local low temperatures of combustion, caused by variations in the thickness of the fire, especially near the tube sheet, cause the formation of CO, and that the use of a brick arch or of a deep fire-box mixes up the gases sufficiently to ensure its further combination. The boilers showing the worst results are those having the least distance from grates to flues and vice versa, and it is also possible that the interlocking finger grate gives poorer results than the bar rocker in this respect. A point worth recollecting is that the fireman's work in these tests was about as good as it is possible to get, and that with poorer firing the results might

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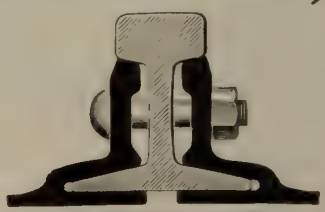

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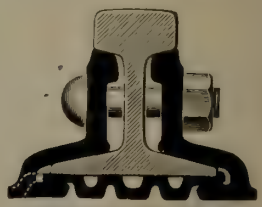

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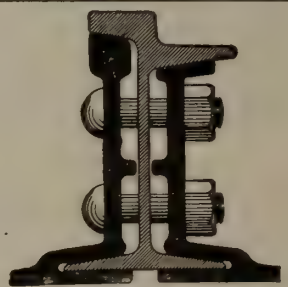

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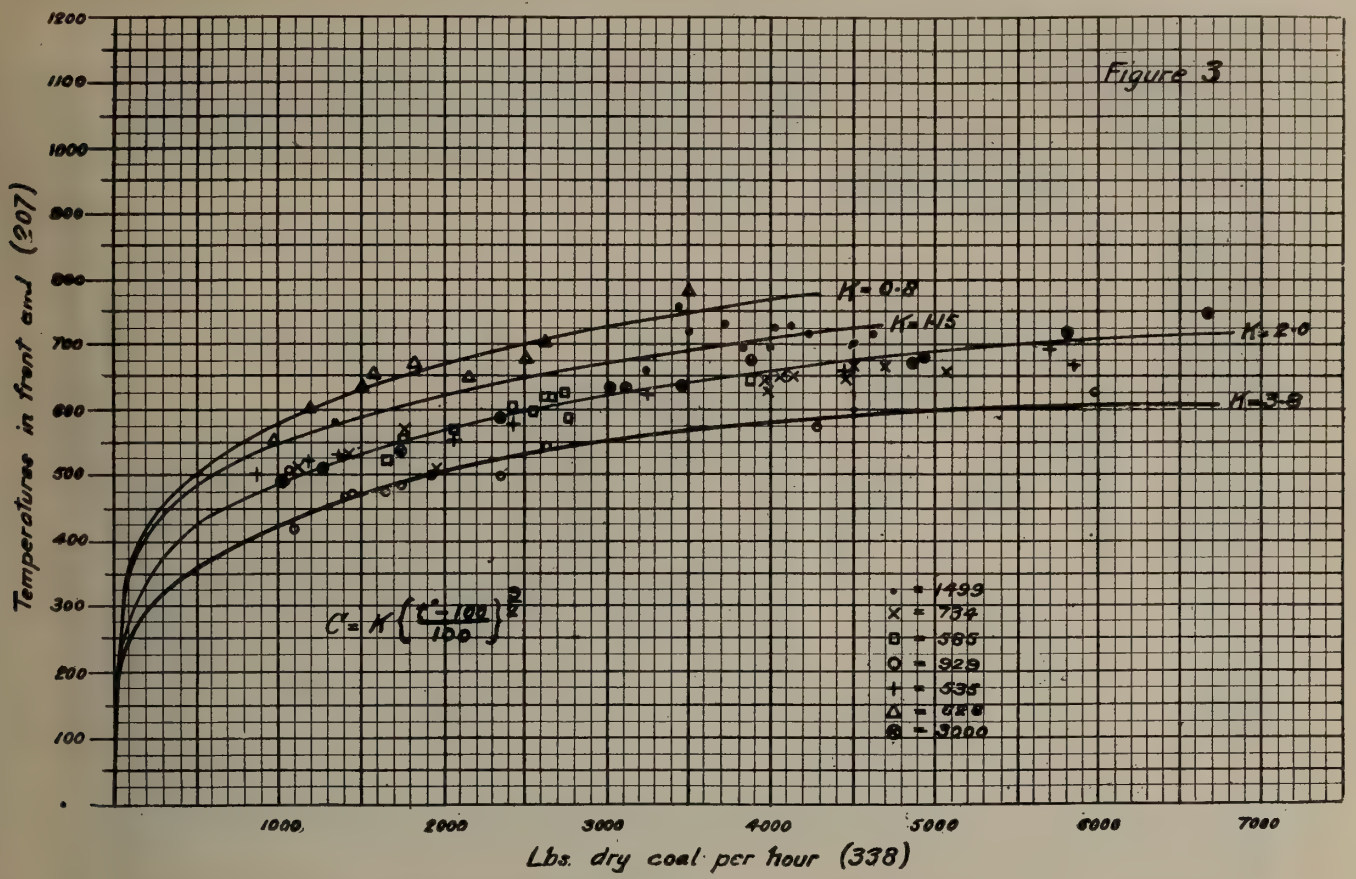

not be nearly as good. The fact remains that with a deep fire-box and a brick arch the loss from this cause is negligible, while with shallow boxes and no arch it may amount to about 15%, and probably more, if the fire were too thick at the tube sheet.

The tests give a large amount of data as to the efficiency of the evaporating surface, but it does not seem possible to separate this entirely from the efficiency of the furnace. By this I mean that, knowing the composition of the flue gases, their fire-box and smoke-box temperatures, it should be possible to calculate the exact amount of heat transmitted to the flues, but although I have spent a large amount of time on this subject the results were of practically no value. Probably a thorough study would afford some results, but the work is very tedious and the results were not sufficiently encouraging to induce me to devote the time required. Taking the results of boiler and furnace together there are, however, some interesting results, justifying as a whole the use of a large boiler. Neglecting 2512, which was fitted with Serve tubes, the total heating surface (based on fire side of tubes), and grate area was as follows, arranged in order of heating surface:

Engine No.	Heating Surface	Grate Area
628	1,753 square feet	29.1 square feet
1499	2,482 square feet	49.2 square feet
734	2,541 square feet	33.8 square feet
585	2,812 square feet	49.4 square feet
535	2,902 square feet	48.4 square feet
3000	3,000 square feet	49.9 square feet
929	4,306 square feet	58.4 square feet

Excepting, therefore, 628 and 929, there was not a great deal of difference in the amount of heating surface in the engines tested, but 1499 and 734, with about 2,500, should show differences as compared to 535 and 3000, with about 2,950, or say an increase of 20% in the heating surfaces.

The relative value of heating surface should be demonstrated in one of two ways. If heating surface is of the same value, however disposed and of whatever extent, then the evaporation per pound of coal should be the same when equal amounts of coal are burnt per square foot of heating surface per hour. As a test of this I have prepared fig. 1, showing the equivalent evaporation per pound of dry coal plotted with reference to the dry coal fired per square foot of heating surface per hour. This diagram differs only from that shown in the P.R.R. report by showing the individual values for each test in place of curves drawn through those values. The heavy dotted line is the curve $E\ (1+\frac{R}{2}) = 14$, where E is the equivalent evaporation per pound of dry coal, and R the pounds of dry coal burnt per sq. ft. of heating surface per hour, and it will be seen to be an excellent average of the various results. From this diagram it would appear that the heating surface question was settled, and it would naturally follow that for any given amount of coal burnt a boiler having large heating surface should evaporate considerably more water than one with less. To exhibit this I have plotted fig. 2, which shows the total evaporation per hour plotted with reference to the pounds of dry coal burnt per hour, from which it will be seen that the results are almost contradictory, as the 50% increased heating surface of 929 shows no greater evaporation than 585, 535, or 3000.

An inspection of fig. 1 will show the reason of this apparent discrepancy, for instance, a curve drawn through 929 would intersect the 10.5 B evaporation line at about 0.45, while that for 3000 is about 0.67, and for 585 about 0.75. In other words, while the various results are at first sight well grouped, there is sufficient variation between them to entirely correspond with fig. 2. The question then arises whether fig. 1 is to be trusted, and the writer between that further investigation shows that it is, and that factors other than heating surface are responsible for its peculiarities, for the following reasons: The points for 3000, which had the largest heating surface of any engine but 929, mostly lie well above the curve, while those for 535 are almost exactly on it—those for 1499 and 734 generally below it, although several of the former agree almost exactly with it—those for 628 are in general below it—and 585 are above it. These facts show that, with the exception of 929, the engines with the largest heating surface show at least the same and generally greater efficiency than those with the smaller, and if this be so the diagram is justified. The variations must in all probability be looked for in the fire-box, and this, I think, explains the specially good results obtained from 3000 at high rates. The firing, while uniformly excellent, was undoubtedly governed somewhat by the demands on it. When the boiler was not so much pressed, the thickness of the fire was not always the best, leading to excess of air or the opposite fault, formation of CO, and this in turn exercised an influence on the results that is almost impossible to accurately measure. The low results of 734 can, of course, be explained by its being a narrow fire-box engine, and as for 929 it must be remembered that this engine was never worked to anything like the capacity of its boiler, and it showed a very high percentage of CO, considering the coal burnt per sq. ft. of grate. It does not seem justifiable from the results obtained from this engine to dispute the general agreement of the other tests, and it therefore appears safe to consider that the curve drawn represents very closely the evaporation results that will be obtained from a boiler with first-class firing and average conditions otherwise.

It will, perhaps, be as well to take this opportunity to refer to a paper which I prepared some three years ago on the question of heating surface, and in which I now believe I drew some entirely erroneous conclusions. The value of heating surface was shown to be proportional to the square root of the length of the tubes, in place of their length. In one sense this is true. For in-

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stance, if with 1,000 ft of heating surface coal was burnt at the rate of 2,000 lbs. per hour, the evaporation would, by fig. 1, be 7 lbs. If the heating surface were doubled the evaporation would be 9.3 lbs. or 1.33 times as great. Now, as the square roots of 1,000 and 2,000 are in the proportion of 1.41 to 1.00, there was sufficient truth this to lead to an attractive fallacy, and in fact, this was really shown in the discussion. Where the mistake was made was in trying to extend this idea to cover the form of the heating surface, whether in a number of short tubes or a lesser number of long ones, and trying to show that the latter were less efficient. This, I am now convinced, was wrong, as the fact was overlooked that if the number of tubes is decreased the amount of gas and, consequently, of heat through each tube, is correspondingly increased. On the assumption that the heat transferred per sq. ft. is proportional to the difference in temperature between the flue gases and the water, this may be shortly demonstrated as follows:

Take two boilers, one with n flues a feet long, the other m flues b feet long, and let na = mb or the heating surfaces be equal.

Let C = circumference of tube in feet = heating surface per foot of length.

Let T = initial temperature of gases, and t, temperature at any point l feet from the end, above the temperature of the water.

Then in general $\frac{dt}{dl} = -Kct$ or $\log t = -Kcl + C$.

When $l = o$, $t = T$, and $C = \log T$.

Then $\log \frac{T}{t} = -Kcl$, and when $l = a$ and $t =$ final temperature $\log \frac{T}{t} = -Kca$, and if

$$na = mb = \log \frac{T}{t} = -Kmbc.$$

Therefore, for equal areas, t is equal.

The results from 929, which had the longest flues tested, might be taken as an indication that long tubes are less efficient than short ones, but this is an isolated case, and the results from the other engines do not support it in the least. Arranging the engines in the order of the length of the tubes, they are 929, 535, 3000, 585, 734, 628, 1499, and an inspection of fig. 1 shows that there is not the least evidence for supposing that the length has anything whatever to do with it This is confirmed by plotting the smoke-box temperatures with reference to the coal burnt per hour, which is shown in fig. 3. In place of drawing straight lines through the points, curves are shown of the form $C = K\left\{\frac{t^\circ 100}{100}\right\}9/2$ which fits the case almost exactly and passes through zero coal at 100° Fahr. From these curves it will be seen that the temperature of the gases passing into the front end of 929 at 4,500 lbs. per hour was less than for the other engines at 3,000 lbs. per hour, so that it is evident that the heating surface did its part, and that the cause for the discrepancy must be looked for elsewhere. The conclusion would, therefore, be that the curve shown on fig. 1 represents with reasonable accuracy the average result to be obtained under good conditions.

There are a number of other interesting facts to be learned from these tests, but they require, as a rule, considerable study to extract them, and in many cases they are extremely difficult to trace out. As an example, why should the boiler of 585, which shows the lowest fire-box temperatures, form usually no CO and be so efficient? And in the one case when its efficiency drops off the fire-box temperature is higher, but the draft is for some reason lower than usual in proportion to the steam used. Such an occurrence might be accidental, or it might be due to some cause that a careful examination would detect. Broader questions are open for study, the frictional loss, the effect of counterbalancing, the value of Serve tubes, the reason for the decreased economy of the two-cylinder compound at high speed as compared with the four-cylinder, the effect of excess of air in the fire-box, and numerous others that will suggest themselves to you, but these I am not in a position to discuss, and probably would not be even did time permit. One thing more there is to say, that we should all realize the debt we have incurred to the Pennsylvania Rd. management for their broad-mindedness and generosity in carrying out such a series of tests, and the light they have thrown on that most complicated and contradictory of man's inventions, the steam locomotive.

The foregoing paper was read before the Canadian Railway Club recently.

West Fort William Crossing Case.

The following order was issued by the Board of Railway Commissioners Mar. 12:

Order No. 2695. The Board of Railway Commissioners for Canada, meeting at Ottawa, Tuesday the 12th day of March, A.D. 1907. Present—A. C. Killam, Chief Commissioner; Hon. M. E. Bernier, Deputy Chief Commissioner; James Mills, Commissioner.

In the matter of the application of the C.P.R. Co. for reconsideration of the Board's order dated Aug. 6, 1906, granting the applicant company authority, under the Railway Act, 1903, sec. 177, to cross with its second main line track the Canadian Northern Ry. Co.'s track at West Fort William, Ont., and prohibiting the applicant company from using its main line track across the Canadian Northern Ry. Co.'s line for shunting or switching cars out of its yard. Upon the hearing of counsel for the applicant Company, the Grand Trunk Pacific Ry. Co., and the Canadian Northern Ry. Co., the evidence adduced, and what was alleged, and upon the report of its Chief Engineer, the Board orders that the application for reconsideration of the order of Aug. 6, 1906, be dismissed; but leave is granted the applicant company to place the derail on the east of the diamond on the south track at the said crossing 200 ft. from the diamond, instead of 500 ft. as at present required.

Canadian Westinghouse Co., Limited.

The directors' report for the year 1906 shows a profit of $346,961.05 from the year's operations, and a surplus of $279,452.40, after payment of a dividend of 6% on the capital stock employed during the year and the creation of a reserve of $100,000 for depreciation of property and plant, and $20,000 for future adjustments of inventory of materials and products as occasion may require. The plant and equipment have only recently been completed at costs less than present values; nevertheless, the directors have considered it a conservative measure to create a reserve fund for future depreciation. The directors have also thought best to create a reserve for possible reduction of values of material and products on hand at close of the year although the amount of these items as shown on the statement correctly represents their actual costs according to a careful inventory. During the year the capital stock of the company was increased from $2,500,000 to $5,000,000, and $1,000,000 of this increase was sold at par to the shareholders. The gross shipments during the year increased approximately 40% compared with 1905, and about 100% compared with 1904. Continued prosperity and business activity still prevail throughout the Dominion and the prospects for 1907 are favorable for a further extension of the business. Unfilled orders on Jan. 1, 1907, aggregated $1,637,658.00.

ASSETS

Cash	$ 105,990 09	
Accounts and bills receivable	910,868 45	
Property and plant (includes air brake and electric properties, real estate, general office building, equipment, sundries and patents, rights and licenses)	2,471,411 08	
Materials and products on hand, Dec. 31, 1906	972,674 97	
Insurance unexpired and taxes paid in advance	9,429 16	
		$4,470,373 75

LIABILITIES

Capital stock: Authorized $5,000,000 00 Issued	$3,489,000 00	
Accounts and bills payable	581,921 35	
Reserve for depreciation of property and plant	100,000 00	
Reserve for inventory adjustment	20,000 00	
Profit and loss account	279,452 40	
		$4,470 373 75

PROFIT AND LOSS ACCOUNT

Net balance Jan. 1, 1906			$ 232,041 35
Net earnings for year 1906		$ 346,961 05	
Less dividends paid for 1906	$ 179,550 00		
Less reserve for depreciation of property and plant	100,000 00		
Less reserve for inventory adjustment	20,000 00	299,550 00	47,411 05
Balance carried forward			$ 279,452 40

Following are the officers and directors for the current year: President, G. Westinghouse; Vice-Presidents, H. H. Westinghouse, L. A. Osborne; Vice-President and General Manager, P. J. Myler; other directors: T. Ahearn, J. M. Gibson, G. C. Smith, W. Y. Soper, C. F. Sise, C. A. Ferry.

The regulations relating to the preservation of health on public works have been amended by the addition of a sub-section to section 5, requiring the Government or the company to keep displayed in a prominent place in every camp one or more copies of extracts from the regulations as prepared and issued in card form by the Dominion Department of Agriculture.

T. Lessard & Co., Ltd., has been incorporated under the Dominion Companies' Act, with a capital of $95,000 and offices at Montreal, to carry on a general contracting business, and in connection therewith to erect and operate mills, elevators and warehouses; to build, acquire and navigate steam and other vessels, and to construct wharves. The provisional directors are: T., A. and R. Lessard, O. Parent, and A. Charbonneau, of Montreal.

The New Brunswick Legislature has unanimously adopted a resolution to the effect that branch railways in the province be taken over by the Intercolonial Ry. It was argued that this would be in the interests of the I.C.R. as well as of the branch lines. The general complaint is that the branch lines are not run for the convenience of the public, or in such manner as to be paying propositions. The Premier suggested that it might be advisable for the Legislature to appoint three commissioners to decide on a fair price to be paid for the various branch lines

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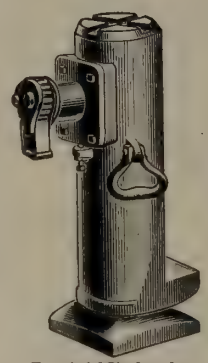

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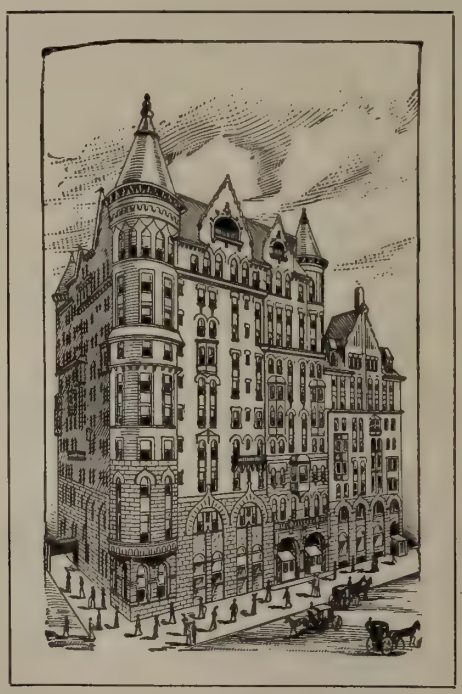

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Manager
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Orders by the Railway Commissioners.

2677. Mar. 15.—Authorizing City of Toronto to lay water pipe on Esplanade between Sherbourne and Princess Sts., under G.T.R. and C.P.R. tracks.

2678. Mar. 15.—Authorizing Dunnville Gas Development Co. to lay a gas pipe under G.T.R. tracks at first public road west of Moulton station, Ont.

2679. Mar. 15.—Authorizing C.P.R. to construct branch line in Moose Jaw, Sask., from near First Ave., for 2,983 ft.

2680. Mar. 16.—Authorizing C.P.R. to construct branch line to Waterous Engine Co.'s premises, Winnipeg.

2681. Mar. 15.—Authorizing Ontario Telephone Co. to cross Michigan Central Rd. with its telephone wires at West Lorne and Rodney, Ont.

2682. Mar. 15. — Authorizing Brandon, Saskatchewan and Hudson Bay Ry. to open for freight traffic its line from Webster to Brandon, Man.

2683. Mar. 11.—Approving location Canadian Northern Ontario Ry. through Ontario county, mileage 207 to 227, west from Ottawa.

2684. Mar. 11.—Authorizing and confirming crossing under C.P.R. line, Don viaduct, Toronto, by G.T.R. siding.

2685. Mar. 14.—Authorizing C.P.R. to construct branch line to Ontario Wind Engine and Pump Co.'s premises, Toronto.

2686. Mar. 14.—Authorizing C.P.R. to construct branch line to Dominion Carriage Co.'s premises, Toronto Jct., Ont.

2687. Mar. 14.—Approving revised location of Canadian Northern Quebec Ry. at Cap Rouge, Que.

2688. Mar. 14.—Authorizing Quebec, Montreal and Southern Ry. to reconstruct bridge over Nicolet River, Que.

2689. Mar. 14.—Authorizing Southwold and Dunwich Telephone Co. to cross G.T.R. tracks with telephone wires at North branch, Talbot Road, Ont.

2690. Mar. 18.—Directing C.P.R. and G.T.R. to reduce their first-class passenger fare on all lines of their respective companies in Canada east of and including Calgary and Edmonton Railway so as not to exceed 3c. per mile, 60 days being given in which to revise tariffs and make effective accordingly. (See April, pg. 253).

2691. Mar. 18.—Authorizing Ingersoll Telephone Co. to cross G.T.R. tracks with telephone wires at Wonham St., Ingersoll, Ont.

2692 and 2693. Mar. 16.—Authorizing Bell Telephone Co. to cross C.P.R. and G.T.R. tracks underground at Front and Cypress Sts., and Eastern Ave., Toronto.

2694. Mar. 12. — Authorizing Pere Marquette Rd. to construct branch line through Dufferin Park, over St. Clair Tunnel, and into Imperial Oil Co.'s premises, Sarnia, Ont.

2695. Mar. 12.—Dismissing application of C.P.R. for reconsideration of order of Aug. 6, 1906, granting C.P.R. authority to cross with its second main line track over Canadian Northern Ry. at West Fort William and using the main line tracks for shunting or switching purposes.

2696. Mar. 18.—Authorizing Preston and Berlin St. Ry. to operate crossings over G.T.R. spur line at Joseph and Wilmot Sts., Berlin, Ont.

2697 to 2712. Mar. 12.—Authorizing Bell Telephone Co.'s crossings over various railways.

2713. Mar. 22.—Authorizing Bell Telephone Co. crossing under Niagara, St. Catharines and Toronto Ry. at Bridge St. and Victoria Ave., Niagara Falls, Ont.

2714. Mar. 22.—Authorizing Bell Telephone Co. crossing over C.P.R. at North Parkdale, Ont.

2715. Mar. 22.—Authorizing Ontario Telephone Co. to cross G.T.R. tracks with telephone wires at Main, Glencoe and Haggerty Sts., Newbury, Ont.

2716. Mar. 22.—Authorizing Southwold and Dunwich Telephone Co. to carry telephone wires over G.T.R. tracks on lot 27, Southwold Tp., Ont.

2717. Mar. 22.—Authorizing Ingersoll Telephone Co. to cross G.T.R. tracks with telephone wires at Mutual St., Ingersoll, Ont.

2718. Apl. 10. — Authorizing Canadian Northern Ontario Ry. to temporarily use for construction trains only, for 90 days from April 1, the crossing of the C.P.R. near Wahnapitae, Ont.

2719. Mar. 22.—Approving location of Windsor, Essex and Lake Shore Rapid Ry., between Windsor and Leamington, Ont.

2720. Mar. 22.—Authorizing G.T.R. to construct spur line to Canada Furniture Co.'s premises, Wiarton, Ont.

2721. Mar. 22.—Approving location of portion of Cheadle Branch, C.P.R. from main line to Alix, Alta.

2722. Mar. 19.—Authorizing G.T.R. to take lots 474 and 475, cadastral plan, St. Joseph's Ward, Montreal, to provide additional station yard room and terminal facilities.

2723. Mar. 15.—Authorizing the Town of Indian Head, Sask., to cross C.P.R. tracks with its electric light wires.

2724. Mar. 25.—Authorizing the Michigan Central Rd. to open its second track between Welland and Niagara Junction, Ont., for the carriage of traffic.

2725. Mar. 27.—Rescinding orders dated Mar. 23 and Aug. 1, 1906, which required the C.P.R. to construct a suitable crossing under its railway at R. J. Cockerline's property, Morris Tp., Huron county, Ont.

2726. Mar. 23.—Authorizing Brandon, Saskatchewan and Hudson Bay Ry. to open its line between International Boundary and Brandon, Man., for carriage of passenger traffic.

2727. Mar. 25.—Approving location of Canadian Northern Ontario Ry. line, mile 10 to 37.9, through Carleton County, west from Ottawa.

2728. Mar. 22.—Authorizing Ingersoll Telephone Co. to cross C.P.R. tracks with its telephone wires at Wonham St., Ingersoll, Ont.

2729. Mar. 7.—Authorizing the G.T.R. to construct spur lines at South River, Ont., to Standard Chemical Co.'s premises.

2730 to 2733. Mar. 22.—Bell Telephone Co. crossings over various railways.

2734. Mar. 26.—Approving revised location of G.T.R. at Logan Ave., Toronto.

2735. Mar. 26.—Authorizing C.P.R. to construct a branch line in Strathcona, Alta., from South Ave. to Mill Ave.

2736. Mar. 26. — Granting temporary crossing order to Windsor and Tecumseh Electric Ry. over G.T.R. branch lines near Ford Automobile Works and Ontario Asphalt Block Co.'s premises at Sandwich St., Sandwich East, Ont.

2737. Mar. 26.—Directing Guelph and Goderich Ry. to provide a farm crossing at grade at J. Barr's farm, Blyth, Ont.

2738 to 2753. Mar. 27.—Orders authorize corrections in location plans previously filed with the Board and approved by them, (such corrections being of a trivial character, merely correcting the fraction mileages, etc., and so on.)

2754. Mar. 28.—Recommending to the Governor-in-Council the approval of agreement of lease between the Detroit River Tunnel Co. and the Michigan Central Rd. Co.

2755. Mar. 28. — Approving Canadian Northern Ontario Ry. location, mileage 37.9 to 59.5, west from Ottawa, Ont.

2756. Mar. 26.—Approving Great Northern Express Co.'s by-law authorizing D. S. Elliott, General Manager, to prepare and issue tariffs of express tolls.

2757. Mar. 27.—Authorizing G.T.R. to construct branch line near Wyevale, Ont.

2758. Mar. 27.—Authorizing G.T.R. to construct branch line in Midland through the townships of Tay and Tiny, and the Town of Penetang, Ont.

2759. Mar. 27.—Authorizing G.T.R. to construct branch line at or near Tiffin, Ont., through townships of Tiny and Tay.

2760. Mar. 27.—Authorizing G.T.R. to construct spur to Toronto Savings & Loan Co., and Brinton Carpet Co.'s premises, Peterboro, Ont.

2761. Mar. 27.—Authorizing G.T.R. to construct spur to J. Gardhouse's premises, Weston, Ont

2763. Mar. 27. — Authorizing Montreal Terminal Ry. to construct branch line in Pointe aux Trembles parish, Que.

2764. Apl. 3.— Authorizing Canadian Northern Ontario Ry. to construct a bridge over South Nation River, North Plantagenet, Ont.

2765-2767. Apl. 3.—Approving location of Moose Jaw Branch, C.P.R., mileage 78.5 to 270.9, Saskatchewan.

2768. Mar. 26.—Authorizing C.P.R. to construct branch in Calgary, Alta., from 4th St. to western side of 1st St. West.

2769. Apl. 4.—Authorizing Southwold & Dunwich Telephone Co. to carry its telephone wires over G.T.R. tracks at three points in Southwold township, Ont

2770. Apl. 4.—Approving location of Canadian Northern Ontario Ry. through Haldimand tp., mileage 158.4 to 167.5, and its revised location through Hamilton tp., mileage 167.5 to 170.8 west from Ottawa

2771. Apl. 5.—Approving location of Vancouver & Lulu Island Ry. from 20th to 14th streets, New Westminster, B.C.

2772. Apl. 5.—Correcting error in order 2664, Feb. 28, re London St. Ry. crossing in London, Ont., over London & Port Stanley Ry., and not the Pere Marquette Rd.

2773. Apl. 5.—Authorizing G.T. Pacific Ry. to temporarily use crossing at grade with C.P.R., at sec. 1, tp. 12, r. 11, w. of 1st mer., Manitoba.

2774. Apl. 5.—Authorizing Bell Telephone Co. to cross the G.T.R. with its telephone wires at Concession St., Galt, Ont.

2775. Apl. 5. — Authorizing Canadian Northern Ontario Ry. to amend its location plan at mileage 14.4 from Toronto north, by providing additional widths on lot 24, con. 2, east of Yonge St., York tp., Ont.

2776. Apl. 5.—Authorizing Montreal Water & Power Co. to lay water mains under G.T.R. tracks at Lachine Canal reserve, St. Henri, Que.

2777. Apl. 4.—Authorizing C.P.R. to construct spur line to Manitoba Canning Co.'s premises, St. Norbert, Man.

2778. Apl. 4.—Authorizing Bell Telephone Co. to carry its wires across G.T.R. at Wilson St. and Ferguson Ave., Hamilton, Ont.

2779 to 2794. Apl. 4.—Authorizing Vancouver, Victoria & Eastern Ry. to build its tracks across various highways in New Westminster district, B.C.; to deviate its located

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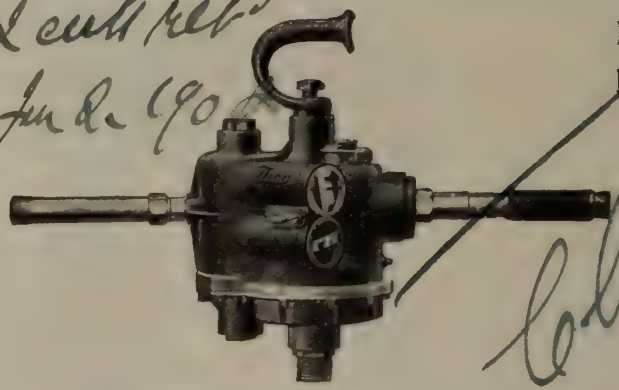

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line from Cloverdale to Abbotsford, and to build a bridge over the Similkameen River at Princeton.

2795. Apl. 5.—Authorizing St. John Ry. to place its cables in conduits across the St. John Bridge & Extension Ry. in St. John N.B.

2796. Apl. 10.—Authorizing C.P.R. to deviate its located line near Mountain, Ont.

2797. Apl. 11.—Approving local freight mileage tariff no. 1, C.R.C. 1, of St. Maurice Valley Ry. Co.

2798. Mar. 27.—Approving of St. Maurice Valley Ry. Co. by-laws authorizing W. R. MacInnes and R. Kerr, Freight and Passenger Traffic Managers, C.P.R., to prepare and issue tariffs of freight and passenger tolls.

2799. Apl. 11.—Authorizing Vancouver, Victoria & Eastern Ry. to deviate its located line over lots 1969, 1970 and 1971, Group 1, Similkameen section. B.C.

2800. Apl. 11.—Approving supplement 8 to classification 12 of Canadian Freight Classification. (See Mar., pg. 157.)

2801 to 2842 inclusive. Apl 9.—Approving Bell Telephone Co.'s crossing of various railways.

2843, 2844, 2845. Apl. 12.—Appointing A. F. Dillinger to inquire into complaints of alleged failure of C.P.R., Canadian Northern Ry. and Qu'Appelle, Long Lake & Saskatchewan Ry. & Steamboat Co. to supply adequate and suitable accommodation for the handling of traffic. These orders are given fully on another page of this issue.

Grand Trunk Pacific Railway Gradients.

The G.T. Pacific Ry. management has supplied the following information to the press: "After three years of exhaustive explorations by a large staff of engineers for the most feasible and economical route through the Rocky Mountains, which comprised the Peace River Pass, the Pine River Pass, the Wapiti Pass and a number of intermediate passes, the G.T.P. Ry. Co. selected the Yellowhead Pass from Edmonton to Prince Rupert, B.C., which was approved by the Government in Nov., 1906. The great importance of the selection of the Yellowhead route can be estimated in considering the exceptionally low and favorable gradients which have been obtained, the maximum gradient through the mountains against eastbound traffic being as low as four-tenths of 1%, or a total rise of 21 ft. to the mile for the entire distance from Prince Rupert to Edmonton, which is no greater than the extremely low gradients obtained on the prairie section of the line from Edmonton to Winnipeg. The maximum gradient against westbound traffic for the entire distance from Edmonton to Prince Rupert is almost equally favorable to that against eastbound traffic, being no greater than five-tenths of 1%, or a total rise of 26 ft. to the mile, and in crossing the mountains but one summit is encountered, the maximum altitude of which is only 3,712 ft. These remarkable conditions exist in this northerly locality on account of the fact that the ranges of mountains along the western portion of the American continent, which have their origin in Mexico, reach their maximum altitude in the region of the fortieth parallel of latitude, from which they gradually recede to the north. No better illustration of these physical conditions could perhaps be given than a comparison of the summits and gradients of the five existing American transcontinental railways with the G.T.P., which is shown on this page. From this comparison it will be observed, as already stated, that in the case of the G.T.P. but one summit is encountered having an altitude of 3,712 ft., with no greater gradient in either direction than five tenths of 1%, or a rise of 26 ft. to the mile west of Winnipeg, which is increased to six-tenths of 1% east of Winnipeg, while in the case of the C.P.R. two summits are surmounted with a maximum altitude of 5,299 ft. and a maximum gradient of 4½%, or 237 ft. to the mile; the Great Northern has three summits of a maximum altitude of 5,202 ft. and a maximum gradient of two and two-tenths per cent., or 116 ft. to the mile; the Northern Pacific three summits, having a maximum altitude of 5,569 ft. and a maximum gradient of two and two-tenths per cent., or 116 ft. to the mile; the Union Pacific three summits, having a maximum altitude of 8,247 ft. and a maximum gradient of two and two-tenths per cent. in reaching San Francisco, and in reaching Portland, Ore., five summits are encountered with a maximum altitude of 8,247 ft. and a maximum gradient of two and two-tenths per cent.; the Atchison, Topeka and Santa Fe Railway six summits, having a maximum altitude of 7,150 ft. and a maximum gradient of three and three-tenths per cent., or 185 ft. to the mile."

In connection with the foregoing we are advised that the C.P.R.'s maximum eastbound gradient of 237 ft. to the mile is being reduced this year to 116 ft. to the mile.

Railway.	Highest Summits.	Max. gradient in feet per mile. East-bound	Max. gradient in feet per mile. West-bound.	Total ascent in feet overcome. East-bound.	Total ascent in feet overcome. West-bound.
Grand Trunk Pacific—					
Western division.	1 Summit.				
Winnipeg to Prince Rupert..	3,712	21	26	6,990	6,890
Eastern Division					
Winnipeg to Moncton.....			31		
Canadian Pacific.....	2 Summits.				
	5,299				
	4,308	237	116	23,106	23,051
Great Northern.....	3 Summits.				
	5,202				
	4,146	116	116	19,987	15,305
	3,375				
Northern Pacific.....	3 Summits.				
	5,569				
	5,532	116	116	17,830	17,137
	2,849				
Union Pacific System—	3 Summits.				
Omaha to San Francisco.....	8,247	116	105	18,575	17,552
	7,017				
	5,631				
Omaha to Portland.....	5 Summits.				
	8,247				
	6,953	106	116	18,171	17,171
	3,537				
	3,936				
	4,204				
Santa Fe System.....	6 Summits.				
	7,510				
	7,453	175	185	34,003	34,506
	6,987				
	7,132				
	2,575				
	3,819				

Recent Dominion Legislation.

The following acts respecting transportation interests have been passed by the Dominion Parliament:

Alsek and Yukon Ry.—Act of incorporation.

Athabaska Northern Ry.—Respecting the powers of the company.

Athabaska Ry.—Extending the time for construction.

Brockville, Westport and North-Western Ry.—Extending the time for construction.

British Columbia Electric Ry.—Confirming agreements between the B.C.E.R., the C.P.R., Lord Strathcona and Mount Royal, and R. B. Angus; and between the C.P.R., the B.C.E.R., the Vancouver and Lulu Island Ry., Lord Strathcona and Mount Royal, and R. B. Angus.

Calgary and Edmonton Ry.—Amending the act of incorporation and subsequent acts.

Canada and British Columbia.—Ratifying an agreement between the Dominion Government and the Government of British Columbia respecting the western boundary of the railway belt.

Canada Central Ry.—Amending the act of incorporation and acts amending the same.

Canadian Pacific Ry.—Amending the acts respecting its construction, etc.

Central Counties Ry.—Respecting the powers of the company.

Dominion Central Ry.—Amending the act of incorporation.

Eastern Townships Ry.—Act of incorporation.

Edmonton, Dunvegan and British Columbia Ry.—Act of incorporation.

Georgian Bay and Seaboard Ry.—Extending the time for construction.

Grand Trunk Ry.—Amending the act confirming an agreement with the G.T.R. for the purpose of securing the extension of the Intercolonial Ry. into Montreal.

Great West Ry.—Extending the time for construction.

Huron and Ontario Ry.—Extending the time for construction, and granting additional powers.

Indian River Ry.—Extending the time for construction.

Intercolonial and Prince Edward Island Railways.—Establishing the I.C.R. and the P.E.I.R. Employes' Provident Fund.

Joliette and Brandon Ry.—Declaring the line to be for the general advantage of Canada and confirming an agreement with the C.P.R.

London and St. Clair Ry.—Respecting the powers of the company.

Malone and Hopkins Point Ry.—Act of incorporation.

Manitoba and Northwestern Ry.—Extending the time for construction.

National Transcontinental Ry.—Amending the acts respecting the construction of the N.T. Ry.

Northern Colonization Ry.—Amending the act of incorporation and granting additional powers.

Orford Mountain Ry.—Extending the time for construction.

Qu'Appelle, Long Lake and Saskatchewan Ry. and Steamboat Co.—Confirming an agreement with the Canadian Northern Ry.

Quinze and Blanche River Ry.—Act of incorporation.

St. Mary's and Western Ry.—Extending the time for construction.

Saskatchewan Valley and Hudson's Bay Ry.—Act of incorporation.

Temiscouata Ry.—Respecting the powers of the company

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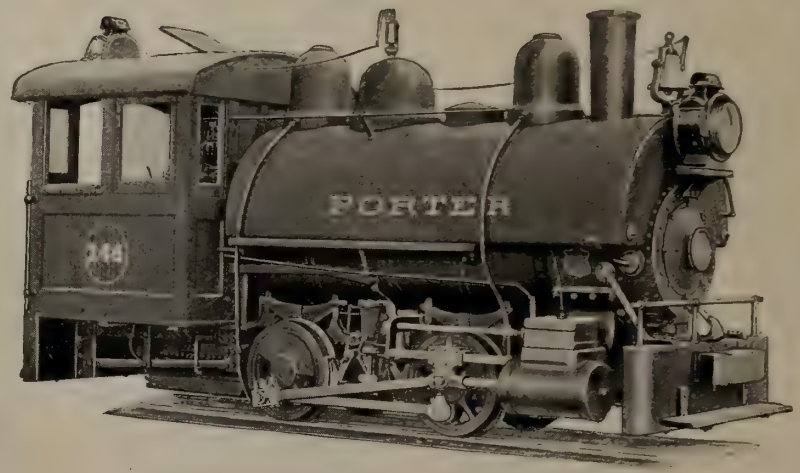

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Penny Fares on the Grand Trunk Ry.

W. N. Robertson applied recently in Toronto for a prerogative writ of mandamus directing the G.T.R. Co. "to run every day throughout the length of its line at least one train having in it third-class carriages on payment of a fare not exceeding one penny for each mile travelled," as provided for in the act incorporating the company. In refusing the application Mr. Justice Teetzel based his findings on the usual procedure which has been observed in our jurisprudence, in which he states in effect that a mandamus is not granted as a right, but by prerogative, and amongst other things it is the absence or want of specific legal remedy which gives the court jurisdiction to dispense it. This, Judge Teetzel declares. does not apply to the case of Robertson and the G.T.R. Co., as the Board of Railway Commissioners is vested with full powers to deal with such a complaint or omission as set out in the case stated and that the board has "all such rights and privileges as are vested in a superior court," and against the decision of which an appeal to the Supreme Court is provided for.

"Unless," says Judge Teetzel, "the section of the incorporating act in question has been superseded or repealed by the subsequent general legislation respecting railways, which was supported by the argument of counsel for respondents, I should assume that, according to the practice of the courts and upon the authorities cited by counsel for the applicant, he has the right to compel the performance by the company of the provisions of the section above referred to, and would be entitled to a writ of mandamus unless it is clear that he has another efficient remedy, either at common law or by statute; and this involves the consideration of the second question. As to this I am clearly of the opinion that under the provisions of the Railway Act, 1903, the applicant is furnished a specific and adequate remedy for the grievances complained of. Not only do I think that adequate remedy is provided for the applicant under the provisions of the Railway Act, 1903, but that such remedy could be more conveniently applied and executed under the direction and supervision of the Railway Commission than by the court, and, therefore, in accordance with the practice, I must refuse the application with costs."

St. Paul, Minn., to Portland, Ore.—We have been advised that arrangements have been completed for the putting in operation, within the next two months, of a freight and passenger service between St. Paul, Minn., and Spokane, Wash., over portions of the C.P.R. The service will be operated over the Minneapolis, St. Paul and Sault Ste. Marie Ry., from St. Paul to Portal; by the C.P.R. to Yahk, B.C., on the Crow's Nest Pass line, thence by the Spokane International Ry., to Spokane, Wash. The Oregon Ry. and Navigation Co.'s line will be used to give a connection between Spokane and Portland. It is not the C.P.R.'s intention to run its trains from Rossland to Spokane, the service being entirely from the east westerly. Through sleeping cars will be run from St. Paul, Minn., to Portland, Wash., on the route.

The C.P.R. on April 10 advanced the wages of its section men on the Western Lines 8%, which is said to represent an increased expenditure of over $500,000 a year.

The Senate Railway Committee by a vote of 11 to 9 recently again rejected the bill designed to limit the speed of trains through the thickly settled portions of cities, towns, and villages, where the road crossings are not guarded by gates and watchmen.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Abitibi and Hudson's Bay Ry.—T. G. Brigham, J. Riopelle, C. Murphy, H. Fisher, Ottawa; M. J. Aylen, North Bay, Ont., have been declared by the Dominion Parliament to be the provisional directors of a company bearing the above title with power to construct a railway from between Frederick House River and Abitibi Lake, on the Eastern Division of the G.T. Pacific Ry., to James Bay. (Feb., pg. 87.)

Atlantic, Quebec and Western Ry.—By amendments to the act passed last session of the Dominion Parliament it is provided that $50,000 is to be appropriated to be expended by a Government commissioner in liquidating the debts incurred by the company or its predecessors; and the company is bound to maintain a bridge at Cascapedia relieving the municipalities of the bonus. The company is authorized to take over the Baie des Chaleur Ry., the only portion of the Atlantic and Lake Superior Ry. being operated; and to construct a branch from Metapedia to the G.T. Pacific Ry. either at Grand Falls or Edmundston, N.B. It is also given five years within which to complete its lines. (Feb., pg. 87).

Bangor and Aroostook Ry.—A contract has been let to A. E. Trites, Salisbury, N.B., to lay a second track on the division between Northern Maine Junction, where the line connects with the Maine Central Rd., and Legrange, where connection is made with the company's main line, about 30 miles. He has also been given a contract to construct a cut-off between Legrange and a point four miles south of West Sebois station on the main line to avoid heavy grades. The cut-off will have a length of about 28 miles. (April, pg. 243.)

Bracebridge and Trading Lake Ry.—A deputation waited on the Ontario Government Mar. 29, and asked that the time for completing the line be extended for five years, and that the subsidy previously voted be continued during the extended period. (April, pg. 243.)

Canada Atlantic Terminal Ry.—An act was considered last session of the New Brunswick Legislature for the incorporation of a company with this title for the purpose of constructing a railway from the harbor of L'Etang, to some point on the St. Croix River, N.B., with power to construct such branches as may be necessary. The capital of the company is fixed at $100,000, and the offices are to be located at St. George, N.B. The provisional directors are: J. S. Clark, J. D. Chipman, G. W. Ganong, H. I. Taylor, H. F. White, G. W. and W. L. E. Marsh. The act provided for the granting of running powers to other companies over the line; to acquire wharves, piers and docks; to construct elevators, storehouses and warehouses thereon; and to acquire and operate steam and other vessels, tugs, barges, lighters, etc.

Cape Breton Coal, Iron and Ry. Co.—The Provincial Engineer for Nova Scotia reports that the company has ceased work on surveys and plans for its projected railway, and has also ceased to operate its mining and other work at Broughton, N.S. (Feb., pg. 87.)

Cariboo and Bella Coolla Ry.—E. Bloomfield is a provisional director of a company which is applying to the British Columbia Legislature at its current session for an act incorporating a company with this title to construct a railway.

Colchester Coal and Ry. Co.—The Provincial Engineer of Nova Scotia, in his report for 1906, states that the company applied for a subsidy for its line from Debert station on the Intercolonial Ry., to the mine. Location surveys have been completed, and the line is now under construction. (Jan., pg. 1.)

East Kootenay Logging Ry.—Application is being made at the current session of the British Columbia Legislature for an act incorporating a company with this title to construct a railway for the purpose of hauling lumber in from the east Kootenay lumber camps to the place of shipment. A. Leitch is principally interested.

Great Northern Ry. (U.S.)—L. W. Hill, President G.N Ry., was credited with saying April 9 that the company was endeavoring to secure extensive terminals in Winnipeg, Minneapolis and Chicago, and had secured all the land required for its business for years to come in Portland and Seattle. If the company's plans for Canada did not miscarry, he expected that within the next 10 years the company would have a railway system there which would be almost an equivalent of the G.N. Ry. system as it at present existed in the U.S. In Canada the company's lines would touch Winnipeg, Brandon, Regina, Calgary, Edmonton and probably Prince Albert. It was very likely that the company's lines would traverse the Peace River country. The line to that country would be some hundreds of miles further north than any existing lines. He could not state just when construction would actually begin, but the company's representatives were in Canada looking over the ground, and everything would depend upon their reports. Winnipeg will be made the general Canadian terminus, and an office to conduct Canadian business will be established there.

It came out before the Railway Committee of the Saskatchewan Legislature recently that the company's lines in that province were being arranged for under the title of the Saskatchewan Central Ry. T. C. Norris, a member of the Manitoba Legislature, who appeared in support of the bill at Regina, stated that the lines proposed to be constructed under it were in continuation of the lines to be constructed by the Great Northern Ry. interests in Manitoba. The maps of the survey laid before the committee showed a route which runs through the southern part of the Cannington district, crosses the C.P.R. Portal-Pasqua branch, and proceeds through Willow Bunch to Alberta boundary. It was stated that connection will be made with Moose Jaw, Regina, Indian Head, Wolseley and other places. (April, pg. 243.)

Great West Ry.—It was announced at Cowley, Alta, April 2, that this projected railway will run easterly out of Cowley, along the highway south of Massacre Butte to a point over the south fork, thence curving northward to the Old Man River, crossing it on the bottom lands toward the mouth of the north fork, thence up the east side of the Wild Rose branch, where the river turns westward, following close to the north bank to the Gap in the Livingstone range. It is proposed to complete the surveys during the summer, and to make all preparations for beginning construction early in the following year.

Halifax and North-Eastern Ry.—Reports from Nova Scotia state that the company formed in 1905 with this title to construct lines from Halifax to Guysboro, and in the Musquodoboit River Valley, has decided to abandon the project. The report of the Provincial Engineer of Nova Scotia for 1906, contains a summary of the results accomplished by the survey parties during the year. Early in the spring, it is stated, an arrangement was made between the Government and the company for a joint survey of the proposed route. Three parties were placed in the field under the charge

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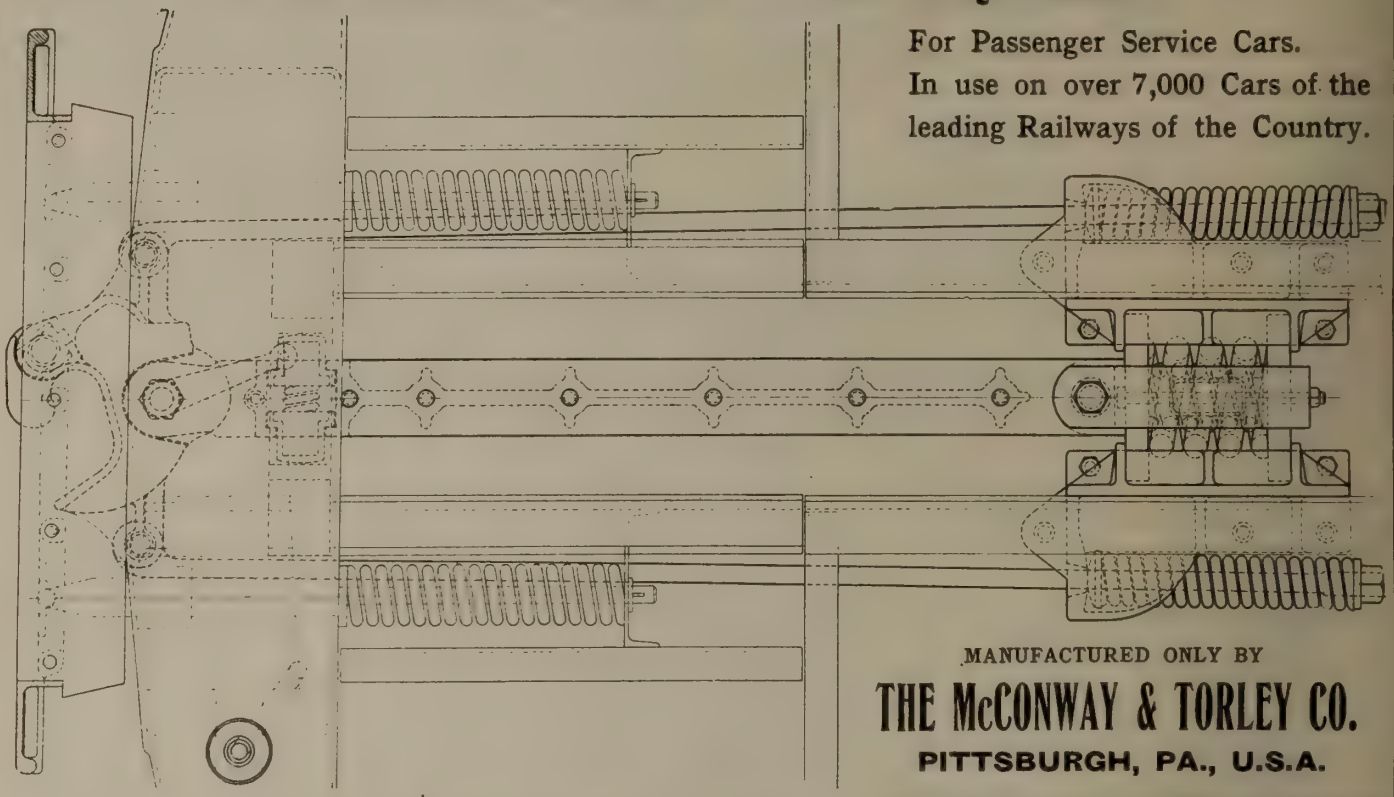

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of W. A. Hendry. J. J. Taylor and L. Whitman respectively. The work of locating the line was carried on during the whole season, the following routes being surveyed: Sunny Brae to Country Harbor, via East River, St. Mary's, 50.8 miles; Cross Roads, Country Harbor to Guysboro, via Gunn's Brook and Salmon River, 28.8 miles; Dartmouth to junction with line from Sunny Brae to Country Harbor at Cameron Lake, via Coast to Musquodoboit Harbor, Crawford's Falls, Balone Lake, Caledonia, East River and St. Mary's, 128 miles; Crawford's Falls to Sloan Lake, via North Side, Musquodoboit River, 42.9 miles, south side to north side Musquodoboit River, connecting line at Upper Musquodoboit, 0.75 miles; junction with first mentioned line at Lowmoor to Dartmouth-Country Harbor line at Barron Brook mouth, via Barron Brook, 11.1 miles; New Glasgow to Sunny Brae via McLellan and Glencoe Brook, 19.3 miles; Stellarton to Sunny Brae, via I.C.R., Ferrona Jct., and Nova Scotia Steel Co.'s railway, 15.7 miles; Stellarton to Island Bridge, via east side East River and Nova Scotia Steel Co.'s railway, 6 2 miles; New Glasgow to Meiklefield, via Vale Railway, Thorburn, and McPherson's Mills, 12 miles; Cross Roads, Country Harbor to Country Harbor mouth, via Westside harbor, 15 miles. The field work was completed by the end of Nov., and the parties called into the office to complete plans and estimates. In the meantime the Provincial Engineer's Department placed a party in the field with the object of obtaining some additional information, and to roughly check some of the routes. The company completed its estimates at the end of the year and submitted the same to the Government. (April, pg. 243.)

Halifax and South-Western Ry.—The report of the Provincial Engineer of Nova Scotia for 1906 records the completion of the line between Halifax and Yarmouth, Dec. 14, 1906, on which day the last rail was laid near Barrington passage, connecting with the old Halifax and Yarmouth Ry. The first passenger train passed over the whole line Dec. 19, and the line was opened for traffic Dec. 22, a tri-weekly service being put in operation. Owing to the extreme depth of water and the difficulty of getting good foundations for the piers it was found impossible to complete the Mersey River bridge, and a temporary bridge was constructed, which will be used until the permanent bridge is completed. It is expected that this will be done by the end of June. About seven miles of track remain unballasted, and a few other matters require attention, but it is expected that the line will be completed in accordance with the terms of the contract by the end of June. With a few small exceptions, such as some additional ballasting and the works specially mentioned the whole line is in good shape. The bridges, many of which, such as those at the Mersey, Jordan, Sable and Clyde rivers, were extremely difficult to construct, are particularly fine, being of steel superstructure on concrete or granite piers resting on rock foundation, the excavation being carried in all cases to the solid rock. The ballasting between Bridgewater and the Clyde river has been particularly well done. The curves on this portion are fairly short, and the tangents long, so that trains should make fast time with perfect safety. While the completion of the line took somewhat longer than was anticipated, almost every place along the south shore has been brought into railway communication with Halifax.

The Middleton and Victoria Beach branch, 40 miles long, was opened for traffic Sept. 17, and a tri-weekly train service is being operated over it. The line, while not equal to the H. and S.W. Ry. main line, is in fairly good shape, and when ballasting is completed should have a good roadbed. While a much lighter line to construct than the main line, the soil is of such a nature as to give a poor roadbed, and one which will be more difficult to maintain. Like all parts of the province along the Bay of Fundy, foundations for masonry structures could not be obtained at reasonable cost, and so wood had to be used. (Feb., pg. 87.)

Hudson Bay Railway.—Speaking in the House of Commons recently upon the Dominion Land Bill, the Minister of the Interior said the Government was fully convinced of the propriety of giving the Northwest an additional railway outlet by way of Hudson Bay at the earliest possible date. With the increase in the production of the West, such an additional outlet will be urgently needed as soon as a railway can be built, even if it were commenced at once. At the same time the Government realized that public opinion throughout Canada could scarcely be expected at the moment, in view of the great obligations incurred in connection with railway enterprises, to sanction the additional obligation that would be incurred by providing immediately for the construction of a railway to Hudson Bay, unless special provision were made to meet that obligation. It believed, however, there would be no objection from any quarter if the funds accruing from the disposal of pre-emptions in the three prairie provinces, under the terms of the proposed land bill, should be considered as a provision in place of the land grant stated in the act, to meet the burden upon the credit of the Dominion as a whole, that must be assumed at an early date—if not immediately—if a railway is to be in operation to Hudson Bay in time to meet the urgent need that is now in plain sight for an additional and shorter railway route from the prairies to tidewater. The land grant in the act referred to is contained in sec. 76 of the bill to amend the acts respecting public lands, which authorizes the Governor-in-Council to make a free grant of land, not exceeding 6,400 acres for each mile of railway within Manitoba, and not exceeding 12,800 acres for each mile outside Manitoba, in aid of the construction of a railway from some point on the C.P.R. to Hudson Bay.

Intercolonial Ry.—Tenders are under consideration for the erection of a new station at Amherst, N.S.

We are advised that the question of laying a second track between Moncton and Pamsee Jct., N.B., about nine miles, is being considered by the Government. (April, pg. 243.)

The Dominion Parliament at the recent session passed votes for capital expenditure as follows:

Original construction	$ 300
To strengthen bridges	61,800
Double tracking parts of line	40,000
Increased facilities and accommodation along the line	12,400
New turntables	4,800
Additional sidings	3,840
Telegraph line	4,900
To increase water service	6,400
Extension to Sydney Mines	10,240
Improvements, Mulgrave	12,200
" N. Sydney Jct.	900
" Sackville	6,000
" Amherst	6,800
" Newcastle	6,400
" Drummondville	5,000
" Campbellton	3,140
" Ste. Rosalie	2,600
Increased accommodation at Pictou	6,800
" " Stellarton	1,800
" " Sydney	1,100
" " Antigonish	2,050
" " Truro	22,000
" " Halifax	60,000
" " St. Flavie	4,300
" " St. John	2,800
Glengarry water tank, etc	1,700
Pirate Harbor water service	2,000
Halifax—Dredging, etc., at deep water terminus	1,000
Moncton—Locomotive and car shops and land purchase	104,000
Chaudiere Jct.—Engine house	13,360
Riviere du Loup—Engine house and machine shop	13,000

International Ry. of New Brunswick.—The act providing for the guarantee of the bonds of the company at the rate of $8,000 a mile for the 160 miles from Campbellton to St. Leonards, N.B., has been passed by the New Brunswick Legislature. It was stated that the line would be completed by the fall of 1908. (April, pg. 243.)

Kettle Valley Lines.—There is under contract an extension from Grand Forks, B.C., up the north fork of Kettle River, to Lynch creek, 19 miles. It was expected to have this completed by May 1. Nothing definite has been arranged as to any further extension.

Kootenay Southern Ry.—The British Columbia Legislature is being asked at the current session to incorporate a company with this title to construct a railway through the Kootenay country. D. C. Corbin is the principal promoter.

London and Port Stanley Ry.—Notice was received April 7 from the Pere Marquette Rd., owning the Lake Erie and Detroit River Ry., which operates the L. and P.S. Ry. under lease, that it proposed to rebuild the bridges over the Thames at London, and over Kettle Creek, St. Thomas, and that it would look to the city for reimbursement. The estimated cost of the bridges is $50,000. The city of London, which practically owns the line, denies its liability to provide new bridges to carry extra heavy traffic whenever the lessee demands them. (Feb., pg. 85.)

Margaree Coal and Ry. Co.—Plans of the railway proposed to be constructed by this company between Whycocomagh, and a junction with the Intercolonial Ry. at Orangedale, N.S., have been filed with the Provincial Engineer of Nova Scotia. Nothing further has been done, and no information has been given to the Government when construction is likely to be commenced.

Minudie Ry.—The Provincial Engineer of Nova Scotia states that work on the construction of this railway was prosecuted vigorously during 1906. When he made an official inspection the line was well advanced to completion. The grading, tracklaying and part of the ballasting had been completed, bridges and culverts were all in, and the fencing being put up. Owing to the great difficulty of obtaining suitable ballast the company had to delay the completion of ballasting for a short time. No subsidy had been paid, but the company having applied for permission to open the line, a recommendation will be made for a partial payment, sufficient being retained to complete the line in accordance with the contract. (Mar., pg. 161.)

New Brunswick Coal and Ry. Co.—Replying to a series of questions in the New Brunswick Legislature, recently, the Premier stated that Brown Bros. abandoned their contract for the repair of the line Oct. 28, at which date work to the value of $49,692.95 had been performed. The commissioners retained 15% of the monthly estimates of work done as security. Since the abandonment of the work by the contractors the repair work has been continued by the commissioners on the contractors' account, and up to Jan. 31, $56,894.09 had been paid on account of the work done. The work has been done on the same specifications and under the charge of the Provincial Engineer. It was estimated that a further expenditure of $25,171.18 will be required to put the roadbed in a perfectly safe and efficient state of repair. The commissioners had sufficient funds in hand to meet this expenditure.

Yukon Central Ry.—The application made last session of the Dominion Parliament by

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Nipissing Central Ry.—J. W. Fitzpatrick, F. R. Latchford, Ottawa; B. F. Pearson, Halifax, N.S.; A. G. Browning, North Bay, Ont.; H. L. Dunn, Toronto; G. Taylor, New Liskeard, Ont.; M. J. O'Brien, Renfrew, Ont.; G. F. Duncan, Portland, Me.; J. J. Whipple, Brockton, Me., are the provisional directors named in the act passed last session of the Dominion Parliament, incorporating a company with this title to construct a railway from Latchford via Blanche River to Wendigo Lake, thence to the G.T. Pacific Ry., at Mattagami Lake, Que.; from Latchford through Colman, Barr, Lundy, Auld, Caine, Barber, Tadhope, James, Smyth and Willison townships and northerly to the G.T. Pacific Ry.; from Latchford southerly to Temagami station on the Temiskaming and Northern Ontario Ry.; from New Liskeard to meet the second mentioned line, and various branch lines. The company was authorized to issue securities to the extent of $30,000 a mile and to enter into agreements with the G.T.R., the C.P.R., the G.T. Pacific Ry., and the Temiskaming and Northern Ontario Ry. (April, pg. 243.)

Orford Mountain Ry. — The extension which is now practically completed, will give a line from Rockland on the St. Francis River to Masonville, Que, on the International boundary. It was expected that the extension would be open for traffic by the end of April. (Jan., pg. 5.)

Port Hood Richmond Ry. Coal Co.—We have been advised that the company has not built any railway except such as is necessary for the operation of its mines. It has a railway charter, however, and may construct a line under it, if satisfactory arrangements cannot be made with the Inverness Ry. and Coal Co.

Port Simpson and Eastern Ry.—D. B. May, of Seattle, Wash., in the course of an interview in New York, stated recently that a New York and London, Eng., syndicate was looking into a proposal to construct a railway from Port Simpsom on the B.C. coast to Fort Churchill on Hudson Bay, to which it was proposed to give the above title.

The line would be about 1,450 miles in length, and it was expected to have the surveyors at work locating the route at an early date. The highest point on the proposed route was 2,400 ft. above sea level, and the line would pass through a fertile country. It was the company's intention to put steamers on the Pacific Ocean to run to Japan, and British shipowners had promised to establish a line to Fort Churchill.

Prince Edward Island Ry.—A contract has been let to E. A. Walberg, Montreal, for the construction of a reinforced concrete wharf at Souris, for the railway service Tenders for the construction of a railway wharf at Charlottetown are under consideration.

The following appropriations were made at the recent session of the Dominion Parliament for works on the P.E.I. Ry.:

Charlottetown—Increased accommodation	$63,600
Souris—Extending wharf	11,000
Albion—Shelter and platform	120
Uigg—Shelter and platform	100
Summerside—Improvements	50
Toronto Road "	10
Murray Harbor Branch—Land purchase	1,312

(April, pg. 245.)

Rainy Hollow Ry.—Application is being made at the current session of the British Columbia Legislature for an act incorporating a company with this title with power to construct a railway from the Alaska-B.C. boundary at the Klihini River (which flows into Lynn canal), thence northerly following Klihini River valley to the Rainy Hollow Copper mines. The company is desirous of obtaining the right to develop water powers and to generate and sell electric power; to operate steamboats and ferries on the navigable waters touched by the railway; and to connect with any line to be constructed from the south or with the G.T. Pacific Ry. C. H. Tupper, W. M. Griffin, and R. I. B. Warton, Vancouver, B.C., are among the incorporators.

Prince Edward Island Tunnel.—The question of the construction of a tunnel under Northumberland Straits to connect Prince Edward Island with the mainland has been raised several times during the recent session of the Dominion Parliament. A report made to the Department of Marine by E. D. Lafleur and A. St. Laurent of the Department of Public Works, estimated the cost of the work at $15,048,000. The report was based on surveys and soundings made in 1892 by Sir D. Fox and A. W. Palmer. Other estimates place the cost of construction of a tunnel at anything between $9,000,000 and $40,000,000. The tunnel as proposed by the surveys of 1892 would be 7½ miles long, and would reach a depth of 150 ft. below water level. There are no insurmountable engineering difficulties in the way of construction, the only question for consideration being that of funds. (April, pg. 245.)

Quebec and Lake St. John Ry.—It is expected that the branch to La Tuque will be completed early in the summer. Work has been progressing uninterruptedly during the winter. (April, pg. 245.)

Quebec, Montreal and Southern Ry.—The Railway Committee of the House of Commons threw out the company's application for authority to construct a line from Contrecoeur, Que., to a point on its present line. The principal opposition came from Sorel, which had given the company a bonus of $90,000 to bring the line into the city, and the proposal if carried out, would have taken the line outside. We are informed that the old portions of the company's lines are being relaid with 80 lb. steel, and the line will be reballasted, work being started on this as soon as the weather permits. All the bridges are to be renewed.

We are advised that no definite action has been taken with regard to the letting of a contract or contracts for the final section of the line under construction to connect with the Quebec Bridge. (April, pg. 245.)

Saskatchewan Central Ry.—See Great Northern Ry. (U.S.)

Temiskaming and Northern Ontario Ry.—The Ontario Government is considering the propriety of its undertaking the construction of a railway from Cobalt to Sudbury, Ont., as a branch of the T. and N.O. Ry. A survey of the route has been authorized, and a preliminary route marked out shows that the Canadian Northern Ontario Ry. would be connected with at Wahnapitae, and the C.P.R. at Sudbury.

The commissioners have decided to effect improvements upon the line from North Bay to New Liskeard by reducing the gradient from 1.25% to 0.60%, and to extend the line so as to have an independent entrance into North Bay. At present the line enters the town over the C.P.R. tracks.

The Ontario Legislature has passed an act eliminating the land grant of 20,000 acres a mile made to the railway under the original act, such grant being unnecessary as the Government had assumed the cost of construction of the line. Under the original act the commissioners were to meet the cost of construction by the sale of the lands. (April, pg. 245.)

Tobique and Campbellton Ry.—The New Brunswick Legislature has passed an act extending the time for the construction of the railway from the present terminus of the Tobique Valley Ry. at Plaster Rock, to Campbellton, N.B. It is provided that the surveys shall be completed within two years and the construction commenced within three years from the passing of the act.

Toronto Junction Terminal Ry.—The Railway Committee of the Ontario Legislature rejected the application for an act incorporating a company to construct a terminal railway in Toronto Junction and York township. The Stock Yards Company at Toronto Junction was the principal promoter of the project.

Trans Alaska-Siberian Ry. — A survey party has reached Dawson, Yukon, after having completed a reconnaisance survey from Dawson to a point in Alaska, about 150 miles beyond the mouth of White River. The survey was made in connection with the project to construct a railway to connect up the C.P.R. and other Canadian lines with the line across Siberia constructed by the Russian Government. J. H. Watson, Chief Engineer of the party, says the route which the party traversed is perfectly feasible for the construction of a railway.

A despatch from St. Petersburg, April 4, states that the Russian Government has rejected a proposal on behalf of a United States syndicate for the construction of a tunnel under Behring straits, in connection with the railway project.

Tusket Wedge Ry.—In June, 1906, the Provincial Engineer of Nova Scotia reports a survey was made by his department of a proposed line of railway from Tusket Wedge to a junction with the Halifax and South-Western Ry., at Salmon River, a distance of about 7½ miles. An easy line was obtained, showing light gradients and easy curvature, with only a few small structures and very light work generally. A large population would be served by the line, and from reports from residents there would be a large amount of traffic. If constructed as a branch of the H. and S.W. Ry., it could be built and operated cheaply, and should give a fair return for the investments. (Mar., pg. 163.)

Vancouver, Westminster and Yukon Ry.—J. Hendry, President, was in Ottawa Mar. 21, discussing with the Dominion Government, the question of the construction of a line from Vancouver to Edmonton, Alta. R. G. McPherson says that the question of a traffic bridge across the Second Narrows, which part of the project is receiving every attention, will require encouragement from the Provincial Government and from the municipality of North Vancouver. (April, pg. 245)

Winnipeg and Northwestern Ry.—The act which the Dominion Parliament was asked to pass at its recent session for the incorporation of a company with this title named as provisional directors: A. T. Drummond, P. Howland, W. K. George, H. M. Mowat, Toronto; H. Fox, of London, Eng. The company proposes to construct a railway from Winnipeg, northerly between Lake Winnipeg and Lakes Manitoba and Winnipegosis, by way of Mossy portage to and along the Carrot River valley, or by an alternative route from near Shoal Lake northwesterly by way of the narrows of Lake Manitoba and the easterly side of Lake Dauphin and Swan Lake to Carrot River valley; thence westerly by way of Fort La Corne to and following the north side of the North Saskatchewan River to the Lobstick valley. It is also proposed to construct branches from Prince Albert to Battleford, Sask.; from Saddle Lake to Lake La Biche, from Victoria to Athabasca Landing, and southwesterly along the North Saskatchewan River to Edmonton, Alta., and from Shoal Lake northwesterly by way of the narrows of Lake Manitoba and the valley of the Swan River to the main line near tp. 47, range 12, west second meridian. A clause was inserted in passing through committee providing that the line must pass Stonewall, Man. (Mar., pg. 163.)

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H. Blitz. E. Auerbach, New York, and L. Auerbach, Boston, Mass., for the incorporation of a company with this title to construct a railway from the northern boundary of British Columbia through the Yukon Territory to Dawson, was withdrawn, the promoters not being prepared to proceed. The line proposed to be constructed was from the B.C. boundary to Dawson. At the 1906 session of the British Columbia Legislature, the three persons named were given a charter of incorporation as the British Columbia Northern and Alaska Ry., to construct a railway from Vancouver to the northern provincial boundary. (Mar., pg. 163.)

Alleged Railway Default.

The following order 2843 was issued by the Board of Railway Commissioners April 12: Whereas numerous complaints have been made to the Board that the C.P.R. Co. has failed to furnish, at places of starting and at stopping places established for such purpose on railway, adequate and suitable accommodation for the receiving and loading of all traffic offered for carriage upon the railway; and that the said company has failed to furnish adequate and suitable accommodation for the carrying, unloading, and delivering of all such traffic; and that the said company has failed to receive, carry and deliver, without delay, and with due care and diligence, all such traffic; and that the said company has failed to furnish and use all proper appliances, accommodation and means necessary for receiving, loading, carrying, unloading and delivering such traffic; and whereas the Board deems it desirable to make inquiry into the facts relating to the complaints aforesaid, and as to whether the said company has failed, and does now fail, to perform the duties imposed upon it by sec. 284 of the Railway Act, or any of them, and as to the powers of the said company in these respects; now, therefore, in pursuance of the powers conferred upon it by sec. 60 of the Act, and all other powers possessed by the Board in that respect; the Board orders that A. Frank Dillinger, of Ottawa, Ont., Operating Assistant to the Chief Traffic Officer of the Board, is hereby appointed and directed to make inquiry and report to the Board:

1. Whether the C.P.R. Co. has, at any time within the period of 12 months next preceding the issue of this order, failed, and whether the said company does now, or at any time up to the making of the final report of the said Dillinger under this order, fail to furnish at any place or places of starting on its railway, or at the junction or junctions of its railway with any other railway or railways, or at any stopping place or places established for such purpose, adequate and suitable accommodation for the receiving and loading of all traffic offered for carriage upon its railway; or to furnish adequate and suitable accommodation for the carrying, unloading, and delivering of all such traffic; or without delay, and with due care and diligence, to receive, carry, and deliver all such traffic; or to furnish and use all proper appliances, accommodation and means necessary for receiving, loading, carrying, unloading, and delivering such traffic;

2. In what particulars the said company has so failed or does fail, as aforesaid, and to what causes any such failure has been or is due;

3. Whether the said company is possessed of all proper appliances, accommodation, and means necessary for receiving, loading, carrying, unloading, and delivering the traffic which will probably be offered, immediately or within the two years next succeeding the issue of this order, at all places of starting on its railway, at all junctions of its railway with other railways, and at all stopping places established by it for such purpose, for carriage upon its railway, and, if not, in what particular respects the said company is not possessed of any such appliances, accommodation or means.

4. If the said company is not possessed of all proper appliances, accommodation, and means necessary as aforesaid, what preparation the said company has made, and what steps it has taken to furnish itself with the same, and whether such preparation and steps are adequate and sufficient for the purpose of furnishing to the said company all further proper appliances, accommodation and means necessary as aforesaid in respect of which its supply is now defective, and, if not, whether it is within the power of the said company to obtain the same within a reasonable time, and, if so, within what time;

5. In the event of the said company having failed, or failing as aforesaid, or of its not being furnished with all proper appliances, accommodation, and means necessary as aforesaid, whether any, and if so what, specific works should be constructed or carried out, or property acquired, or what property, cars, motive power, or other equipment should be acquired, or what steps, systems, or methods should be taken or followed by the said company, so as to enable it, without delay, and with due care and diligence, to receive, carry, and deliver all traffic offered for carriage upon its railway;

6. What is or would be the effect, upon the power of the said company to receive, carry, or deliver traffic, without delay, of compliance with the provisions of the Lord's Day Act.

7. In how far the said company has been prevented by any of the causes set out in the second paragraph of its answer of Feb. 27, 1907, to the inquiries made by the letter of the Secretary of the Board of Feb. 14, 1907, from receiving, carrying, and delivering traffic without delay, and in how far are any of such causes likely to continue to prevent the said company from doing so and what steps, if any, can and should be taken by the said company, or otherwise, to remove or lessen such operation of any of said causes.

And the board further orders that the said Dillinger report from time to time to the Board upon any of the matters aforesaid, as he may think desirable, or as may be directed by the Board.

On the same date orders 2844 and 2845 were issued ordering similar enquiries respecting the Canadian Northern Ry and the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co. These orders are identical with 2843 respecting the C.P.R., except that clause 7 of that order is omitted from 2844 and 2845.

Canadian Freight Association.

The annual meeting was held at Montreal April 11. Following is the organization for the current year: President, S. P. Howard; Vice-President, J. F. Chapman; Second Vice-President, J. J. Mossman.

Advisory Committee—W. R. MacInnes, chairman; J. Pullan, W. C. Rowley.

Executive Committee—W. B. Bulling, J. E. Dalrymple, J. J. Mossman.

Classification Committee—W. B. Bulling, M. H. Brown, S. P. Howard, W. Phillips, F. J. Watson, J. E. Dalrymple, C. E. Dewey, E. R. Bremner, W. M. Kirkpatrick.

Freight Inspection Committee—S. P. Howard, F. Conway, Guy Tombs, F. F. Backus, L. Macdonald, M. H. Brown, John Paul, J. F. Chapman, C. A. Jaques, W. M. Kirkpatrick.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Canadian Westinghouse Co. has issued its revised circulars, 1028, dealing with rotary converters, and 1069, dealing with air blast transformers.

The Safety Car Heating and Lighting Co. has removed its offices from 160 Broadway to the United States Express Building, Trinity Place and Rector St., New York City.

The American Locomotive Company has issued the seventh of the series of pamphlets which it is publishing to include the various standard types of locomotives. This pamphlet is devoted to the mogul type and illustrates and describes 25 different designs of this type built for various railways. The designs illustrated range in weight from 49,000 to 187,000 lbs., with hauling capacities adapted to a variety of road and service conditions.

The American Locomotive Co. has issued a pamphlet illustrating and describing the rotary snow plow which it builds. The pamphlet contains a brief account of the work done by the rotary in fighting snow on various railways, with illustrations of the rotary in operation; a description of the plow, giving the particular features of the design, and a set of rules for the guidance of those operating the rotary, based on experience gained during the past years in handling it.

At the annual meeting of the Robb Engineering Co., held at Amherst, N.S., recently, the reports showed the output for the year, at Amherst, reached about $500,000, and, including the shipments of the Robb-Mumford Works, an allied concern at South Framlingham, Mass., the total output reached $1,000,000. This was an increase over the business done in 1905. Dividends have been declared on the stock of the Robb Engineering Co., and on the preferred stock of the Robb-Mumford Boiler Co. Following are the officers and directors for the current year: President, D. W. Robb, Amherst; directors, W. B. Ross, K.C.; M. C. Grant, R. E. Harris, K.C.; A. E. Collas, W. M. Aitken, of Halifax; J. S. McLennan, Sydney, N.S.; A. G. Robb, R. W. Robb, of Amherst: Secretary-Treasurer, G. W. Cole, Amherst.

Upon agreeing as to a stipulation of facts as to 15 counts involving illegal rebates, the Great Northern Ry., U.S., was fined $15,000 by the Federal District Court at Minneapolis, Minn., April 6.

The agreement between the Dominion Government and the B.C. Government defining the western boundary of the tract of land known as the Railway Belt, granted by the B.C. Government to aid in the construction of the C.P.R., was approved by the B.C. Legislature in 1906, and was finally ratified and confirmed by the Dominion Parliament at its recent session.

The Quebec Passenger and Elevator Co. has been incorporated under the Quebec Companies' Act with a capital of $80,000 and offices at Quebec, for the purpose of conveying passengers, freight, baggage and merchandise in the city of Quebec, and within the counties of Quebec, Portneuf, Montmorency and Levis, and to collect tolls for such services. The provisional directors are: A. and L. Cumminas, J. M. McCarthy, W. and F. S. Lee, of Quebec city.

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Railway Rolling Stock Notes.

The G.T.R. is receiving freight cars at the rate of about 30 a day from U.S. car shops.

The Dominion Parliament at its recent session voted $2,500 for repairs and alterations to the Governor-General's car

The Canadian Northern Ry. has ordered 50 steel cars, 100,000 lbs. capacity, from the Dominion Car and Foundry Co., Montreal.

The Intercolonial Ry. has placed an order with the Canadian Locomotive Co. for 10 consolidation locomotives similar to those recently delivered.

The Quebec Central Ry. is having a number of vestibule cars built in the United States, and is having a baggage car built at its own shops, Newton, Que.

The British Columbia Mills Lumber and Trading Co., Vancouver, B.C., has received material for six flat cars from the Crossen Car Manufacturing Co., of Cobourg, Ont.

The Canadian Northern Ontario Ry. and the Canadian Northern Quebec Ry. are each having built by the Dominion Dump Car Co., Montreal, a Rodger double-plow distributing car.

The Canadian Locomotive Co. has completed the delivery of six consolidation locomotives to the Intercolonial Ry., and is now making deliveries on an order for 30 locomotives to the Canadian Northern Ry.

The locomotive which the Toronto, Hamilton and Buffalo Ry. has received from the Locomotive and Machine Co., of Montreal, the specifications of which were given in our April issue, is fitted with the Walschaert valve gear.

The Intercolonial Ry. between Mar. 15 and April 15 received three consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont., and 82 hopper cars, 15 tons capacity, from Rhodes, Curry & Co., Amherst, N.S.

The Intercolonial Ry. between Mar. 15 and April 15 ordered 10 consolidated locomotives from the Canadian Locomotive Co., Kingston, Ont., and 100 platform cars, 80,000 lbs. capacity, from Rhodes, Curry & Co., Amherst, N.S.

The Acting Minister of Railways, replying to a question in the House of Commons, April 3, said the G.T.R. and the other roads with which it interchanged business, were using the cars purchased for the G.T. Pacific Ry., on the usual per diem rates.

The G.T. Pacific Ry. is receiving freight cars from Rhodes, Curry & Co., Amherst, N.S These cars are being taken to Sydney, N.S., loaded with steel rails and sent to Fort William and other points, from whence they will be distributed to the tracklaying gangs.

The Locomotive and Machine Co., of Montreal, made delivery during Mar. of one consolidation locomotive to the Toronto, Hamilton and Buffalo Ry.; two 10-wheel locomotives to the G.T.R.; eight 10-wheel locomotives and four steam shovels to the C.P.R.

The Canadian Northern Ry., between Mar. 15 and April 15, received the following rolling stock: One locomotive from the Canada Foundry Co., Toronto; 50 flat cars from the Crossen Car Manufacturing Co., Cobourg, Ont., and one palace car from the United States.

The Temiskaming and Northern Ontario Ry. has ordered two auxiliary cars from Rhodes, Curry & Co., Amherst, N.S. It has also ordered three workmen's cars and two second-class coaches from the Crossen Car Manufacturing Co., Cobourg, Ont., and a 45-ton steam shovel from Mussens Limited, Montreal.

The G.T. Pacific Ry. has placed orders with the Canada Car Co., Montreal, for 1,000 flat cars, 60,000 lbs. capacity; three flat cars, 80,000 lbs. capacity; six flat cars for unloaders, 20 caboose cars, and 12 Rodger double plow distributing cars. These latter are being built under license from the Dominion Dump Car Co., Montreal.

The 500 steel Otis type rolling shaft bottom drop door coal cars, 100,000 lbs. capacity, for which the C.P.R. has placed an order with the Dominion Car and Foundry Co., will be built under license from the Dominion Dump Car Co. The dimensions are: length, over end sills, 38 ft. 10 in.; extreme width, 10 ft. 0⅜ in.; interior dimensions, 36 ft. 9½ in. by 9 ft. 7 in.

The C.P.R. between Mar. 15 and Apr. 15 placed the following orders for rolling stock: 10 sleeping cars, 50 box baggage cars, 93 box cars, 26 flat cars, 17 coal cars, 16 boarding cars at its Angus, Montreal, shops; 13 vans at its Farnham, Que., shops; 500 steel coal cars, 100 steel ore cars and 36 steel flat cars from the Dominion Car and Foundry Co., Montreal.

The 500 flat cars for which the Central Vermont Ry. has placed an order in the U.S., are to be all delivered by May 31. The principal dimensions are: Length over end sills, 36 ft., 9¾ in.; width over side sills, 9 ft., 0¾ in.; centre to centre of cross ties, 7 ft. 4 in.; outside end sill to centre of bolster, 5 ft.; wheel base of truck, 5 ft. 2 in.; centre of draw bar to top of rail, 2 ft. 10½ in.; capacity, 60,000 lbs.

The general specifications of the 1,000 flat cars for the G.T. Pacific Ry., which are being built by the Canada Car Co., are: length over end sills, 36 ft. 9¾ in.; width over decking, 9 ft. 3¾ in.; height from rail to top of decking, 4 ft. 1¼ in.; wheel base, 5 ft. 2 in. The special fittings include Westinghouse air brakes, Simplex body and truck bolsters, Simplex brake beams and Canada Car Co.'s wheels.

The Dominion Parliament, at its recent session, passed the following votes for rolling stock, etc.: Air brakes to freight cars, $4,200; to exchange drawbars of freight cars, $7,500; air compressors and reservoirs, $1,080; air brake equipment, $3,900; ballast plough and unloader, $1,300; new machinery for locomotive and car shops, $20,000, for the Intercolonial Ry., and $4,000 for the rolling stock for the Prince Edward Island Ry.

The C.P.R. between Mar. 15 and April 15 received the following rolling stock: Two locomotives from the Locomotive and Machine Co., of Montreal; one locomotive from the American Locomotive Co.; five locomotives, one sleeping car, seven first-class cars, 317 box cars, 115 flat cars, 54 ballast cars from its Angus, Montreal, shops; four vans from its Farnham, Que., shops; and 106 steel coal cars from the Dominion Car and Foundry Co., Montreal.

The 10 passenger locomotives which the C.P.R. has ordered at its Angus, Montreal, shops, will be duplicates of those illustrated in our issue of July, 1906, the general specifications of which follow:

Working pressure, boiler, 200 lbs.; firebox, width, 5 ft. 9⅛ in.; firebox, length, 7 ft. 10⅛ in.; number of tubes, 193-22; length of tubes, 19 ft. 6 in.; diameter of tubes, 2¼ in. and 5 in.; heating surface, tubes, 2,777 sq. ft.; heating surface, firebox, 480 sq. ft.; heating surface, total, 2,957 sq.ft.; grate area, 45.6 sq. ft.; cylinders, 21 in. by 28in.; driving wheels, 75 in.; weight on drivers, 139,000 lbs.; weight, total engine, 212,000 lbs.; weight of tender, 122700 lbs.; weight of tender light, 52,700 lbs.; capacity of tender, 10 tons coal and 5000, imperial gallons of water.

Following are specifications of cars for which the Intercolonial Ry. has placed orders with Rhodes, Curry & Co., Amherst, N.S.

100 BOX CARS, 60,600 LBS. CAPACITY—Length,36 ft. 9⅝ in. over end sills; width, 9 ft. 0 ⅝in.; length inside, 36 ft.; width inside, 8 ft. 6 in.; wheel base, 5 ft. 2 in. Tower couplers, Simplex bolsters and brake beams; and Westinghouse air brakes.

5 REFRIGERATOR CARS—Length, 36ft. over end sills; width, 8 ft. 10 in. over side sills. Tower couplers, Simplex bolsters and brake beams, and Westinghouse air brakes.

70 HART CONVERTIBLE CARS—Length over end sills, 34 ft.; width, 9 ft. Tower couplers, Simplex bolsters and brake beams, and Westinghouse air brakes. To be built under license from Dominion Dump Car Co.

130 HOPPER CARS, 30,000 LBS. CAPACITY—Length over end sills, 16 ft. 10 in.; width, over side sills, 6 ft. 11 in.; wheel base, 10 ft. Tower couplers, Westinghouse air brakes.

The six dining cars which the C.P.R. is having constructed at its Angus, Montreal, shops, will have a seating capacity of 36. They will be 72 ft. long, and 9 ft. 10½ in. wide, and will have steps only at the dining end of the car, the kitchen being carried out on the platform at the other end. The other specifications provide: body and underframe, wood; brake beams, Simplex, with adjustable head; brake shoes, steel; brakes, Westinghouse air, high speed; couplers, Tower passenger; heating system, Gold, with Frumveller heater; platforms, steel, Standard Coupler Co.'s.; roofs, standard passenger, covered with canvas; seats, movable chairs; springs, 38 in. double elliptic; trucks, six-wheel, 5 by 9 in. journals; wheels, 36¼ in. steel-tyred.

Referring to recent press reports that the G.T.R. had ordered 500 flat cars, we are advised that the cars mentioned are undoubtedly those ordered in Feb. by the Central Vermont Ry. It was also reported that the G.T.R. was asking prices on ten passenger cars, but we are informed the company is not in the market for passenger cars at present, the last order placed being in Jan., for 10 passenger cars for delivery during Aug. The company has under construction at its own shops and at private works, 70 passenger cars of its standard type, and four conductors' vans of a new type. The latter are being built at the company's shops, London, Ont., and are to be used only by the crews engaged in the transfer of freight trains between the Mimico and the York yards east and west of Toronto. The new passenger cars will replace old cars sold to the G.T. Pacific Ry. for construction purposes.

Railway Commissioners' Rate Orders.

2570. Feb. 15. In the matter of the application of the Montreal Produce Merchants Association for a direction to the G.T. and C.P.R. companies to make the refund provided for by the Board's order dated Nov. 19, 1906, applicable to business originating south and east of Montreal, in the Province of Quebec, and to order a refund of amounts charged at Montreal for the cartage on cheese for export for the year 1906, as in the case of the said order with respect to export business of the year 1905; this application having come on for hearing at the sittings of the Board held in Montreal on Jan. 22, 1907. Upon hearing what was alleged by the members of the Transportation Commmittee of the Montreal Produce Merchants' Association, and counsel for the G.T. and C.P.R. companies and the evidence adduced, the Board orders that the said railway companies are hereby authorized to refund to the exporters of cheese the tolls collected from them during the season of St. Lawrence navigation for the year 1906, for the carriage from the companies' cars or warehouses, in Montreal, to the exporters' warehouses, of cheese shipped from points west of Montreal received at Montreal in consignments of not less than 500 lbs., and subsequently exported via the port of Montreal during the same season, provided that the said refund be made in proportion to the volume of traffic to all those who have paid such cartage tolls.

The poll tax which the U.S. Government collects on all aliens—Canadian citizens and Mexicans being specifically exempted—will be increased to $4 on July 1. The transportation companies carrying the passengers into the country are made liable for the tax.

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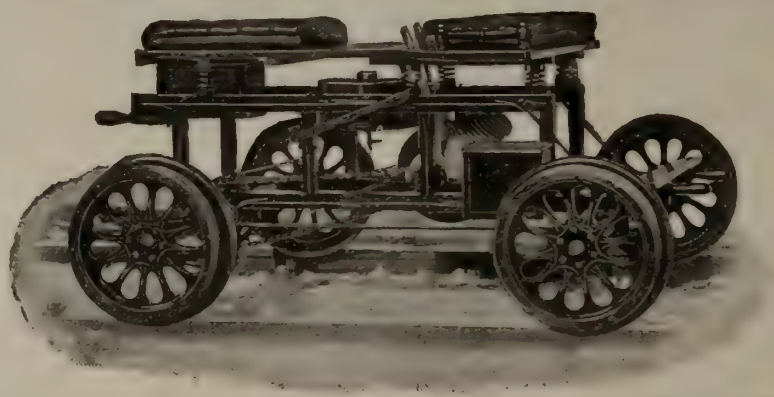

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Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.—Net earnings from all sources, exclusive of land sales, for Feb., $4,390; making for eight months ended Feb. 28, $57,324.

Algoma Central and Hudson Bay Ry.—See Ontario railway subsidies for 1907.

Atlantic and Lake Superior Ry.—A scheme of arrangement between the A. and L. S. Ry., and the Baie des Chaleurs Ry., and their creditors, containing provisions for raising additional share capital and settling the rights between preference and ordinary shareholders, has been filed in the Exchequer Court. Copies of the scheme of arrangement can be obtained at the offices of the companies' solicitors, 189 St. James St., Montreal. The A. and L. S. Ry. is the title of a company which was incorporated to amalgamate the B. des C. Ry., and several other short lines, and to construct the necessary connecting links so as to form a complete line from Gaspe, Que., to Lake Superior. The project never fully materialized, and the B. des C. Ry., which was being operated by the A. and L. S. Ry., was subsequently taken over by the bondholders in Great Britain and operated by them. The Dominion Parliament has before it at the current session a bill providing for the taking over of the line by the Atlantic, Quebec and Western Ry.

The newspapers report the sale of the A. and L. Ry. to the Atlantic, Quebec and Western Ry., by the bondholders, but we have been unable to obtain a verification of the statement.

Baie des Chaleurs Ry.—See Atlantic and Lake Superior Ry.

Canadian Northern Ry.—The London, Eng., Stock Exchange has been asked to quote £211,300 additional 4% first mortgage consolidated debenture bonds, guaranteed by the Manitoba Government.

Canadian Pacific Ry.—Figures recently published show that the C.P.R. has, in round numbers, 35,000 stockholders, which shows an average individual holding of about 34 shares. An unconfirmed report states that the directors have under consideration a proposal to split its stock into smaller amounts so as to induce a wider diffusion

The Central Ontario Ry. directors propose to ask the shareholders at the annual meeting to be held at Trenton, Ont., May 15, for authority to issue bonds to the amount of $1,200,000 to retire the outstanding bond issue and for other purposes of the railway A special meeting of the shareholders will be held immediately after the annual meeting to sanction an increase of the capital stock to $3,340,000, or such other sum as the Governor-General-in-Council may approve, and to authorize the issue of paid-up capital stock to the holders of overdue interest coupons, such stock to be issued at par for the face value of such coupons.

Cape Breton Ry.—The Nova Scotia Legislature voted a subsidy of $3,200 a mile for 30 miles, and has paid $91,990, of which $20,000 was paid in 1906, leaving a balance of $4,010 unpaid. No subsidy has been voted for any work done beyond the thirtieth mile.

Crow's Nest Southern Ry.—Following are the officers and directors for the current year: President, Hon. G. A. Cox; Vice-President, Hon. R. Jaffray; Treasurer, E. Sawyer, St. Paul, Minn.; Managing Director and Secretary, G. G. S. Lindsey, K.C.; Directors, Sir H. M. Pellatt, E. R. Wood. The company does not issue any annual report.

Dominion Atlantic Ry.—Gross earnings for Feb. $59,200, against $54,067 for Feb., 1906, making for two months ended Feb. 28, $128,000, against $112,400 for same period 1906.

Great Northern Ry. (U.S.)—It is reported from Minneapolis that the company will at an early date acquire a number of lines which now operate as independent concerns. The lines to be acquired include the Vancouver, Victoria and Eastern Ry. and Navigation Co., in British Columbia; the Brandon, Saskatchewan and Hudson Bay Ry., and the Midland Ry. of Manitoba in Manitoba. This report was put in circulation following upon the judgment of the Supreme Court of Minnesota authorizing the issue of the proposed $60,000,000 of new stock.

Halifax and Southwestern Ry.—The amount paid by the Nova Scotia Government in connection with the construction of the main line to Sept. 30, 1906, was $2,456,399.31, of which $160,579.99 were special payments provided for by Chap. 26 of 1903. Of the subsidy of $400,000 voted for the construction of the Middleton and Victoria Beach Ry., $96,000 was paid to Sept., 1905, and the balance of $304,000 was paid by bonds issued to the company during the year.

Halifax and Yarmouth Ry.—The subsidy account was closed during the year ended Sept 30, 1906, by the payment of the $3,550,-67 in hand at the beginning of the year. The total payment has been $160,000, being at the rate of $3,200 a mile for 50 miles The line is now part of the Halifax and Southwestern Ry.

Lake Superior Corporation.—The Treasurer of Ontario stated in the Legislature Mar. 27, that arrangements had been made for another extension of the Government guarantee of the loan for the benefit of the industries at Sault Ste. Marie, still outstanding. The original guarantee was in respect of a loan of $2,000,000. One-half of this was arranged for in 1905, and the guarantee renewed in respect of the other $1,000,000. The obligation became due again in the fall of 1906, and was renewed for a further period. An endeavor was being made to obtain British capital to take up the bonds, and it had been agreed to extend the guarantee for a further period of six months from April 1. The company owns the Algoma Central and Hudson Bay Ry., the Manitoulin and North Shore Ry., and the Algoma Central Steamship Line.

Michigan Central Rd.—A committee of the directors has been appointed to decide about providing for $14,000,000 of Canada Southern Ry. bonds which mature Jan. 1, 1908. It is expected that an announcement will be made at an early date of the terms for refunding these bonds. The Canada Southern Ry. is that portion of the main line of the M.C.R., passing through Canada.

Morrissey, Michel and Fernie Ry.—The annual meeting which was to have been held in Toronto, April 1, was adjourned to a date to be fixed later. The railway is owned by the Crow's Nest Coal Co.

New Brunswick Coal and Ry. Co.—This railway, 69 miles long, is operated by a commission appointed by the New Brunswick Government. The line is set down in the Auditor-General's report as an asset to the value of $1,150,000. The line represented, the Premier recently stated, an outlay of $1,119,012.54, of which the N.B. Government had guaranteed bonds to the amount of $700,000, An offer of 3% on the Government's interest in the line had been refused, and he did not think the line should be leased for less than 4%, which would mean $146,000 a year. The property, he considered, would soon be a paying one, and he expected that it would in time be taken over by the G.T. Pacific Ry.

Pere Marquette Rd.—The shareholders at the adjourned annual meeting recently ratified the settlement with the Chicago, Cincinnati and Louisville Rd., turning the line back to the latter, and cancelling the bonds issued for its purchase. The lease of the Pere Marquette Rd. to the Cincinnati, Hamilton and Dayton Rd. was repudiated. The question of the election of directors was left undecided, no party being strong enough to carry their men.

Quebec Central Ry.—Gross earnings for Feb., $49,750.35; net earnings, $6,715.05, against $61,781.58 gross and $19,011.45 net for Feb., 1906. Net earnings for two months ended Feb. 28, $16,561.67, against $39,007.58 for same period, 1906.

Quebec and Lake St. John Ry.—Earnings for Feb , $33,978, against $24,959 for Feb., 1906, making for two months ended Feb. 28, $69,823, against $54,290 for same period 1906.

Temiscouata Ry.—Traffic receipts for Feb., $11,198.78 against $12,078.32 for Feb., 1906.

Temiskaming and Northern Ontario Ry.—The report of the commissioners as to the operation of the line for 1906 showed gross earnings of $544,018, and the expenses $362,492, leaving net earnings of $181,526. Of this amount $158,000 had been transferred to the Provincial Treasurer, and had been utilized to meet interest on the original loan of $6,000,000 for construction.

The total amount realized from sales of townsites was $117,286, of which $14,467 was unpaid Dec. 31; bonuses on mining rights the aggregate was $151,100, of which $16,000 was unpaid on the date named. The plotting and prospecting of townsites and the expenses re-mining rights totalled $31,525, leaving a balance of $207,535 on this section of the Commission's work. Of this surplus $123,674 was applied to the cost of the railway, $83,725 to operation, leaving a balance of $136 in hand.

The expenditure upon construction for the year ended Dec. 31, 1906, as shown by a special return made to the Legislature, was $2,300,469.18, of which $232,666.66 represented discount, stamps and underwriting in connection with the London, Eng., loan.

Toronto, Hamilton and Buffalo Ry.—Earnings for Mar., $64,685.90, against $69,063.05 for Mar., 1906.

Recent Provincial Legislation

The following acts affecting transportation and allied interests have been passed at the current session of the Nova Scotia Legislature:

Acadia Coal Co.—Amending act of incorporation and acts amending the same.

Dominion Iron and Steel Co.—Amending acts respecting the company.

Inverness Mining and Transportation Co.—Amending act of incorporation and acts amending the same.

Margaretville Steamship Co.—Act of incorporation.

Nova Scotia Railway Act.—Amending the N.S. Railway Act as it appears in the Revised Statutes of 1900.

Nova Scotia Society of Engineers.—Act of incorporation.

Pacific Whaling Co.—Amending acts of 1903, 1905 and 1906, relating to the company.

Port Hood, Richmond Ry. Coal Co.,—Respecting the act of incorporation, etc.

Queen's County.—To enable the municipality to borrow money to pay railway damages and to legalize certain payments of railway damages.

The Dominion Parliament at its recent session voted $2,500 to the Faculty of McGill University, towards the foundation of a School of Railway Engineering and Transportation in general in connection with the Faculty of Applied Science.

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Dominion Railway Subsidies.

The House of Commons was asked April 15 to vote a number of subsidies in aid of the construction of railways. The resolutions submitted provided aid for 24 lines, covering a total of 1,057 miles, all of which were revotes of former subsidies which had not been taken advantage of. The aid to be given is at the usual rate, and the customary conditions as to the determination of the amount, whether the minimum of $3,200 per mile, or how much more up to $6,400 per mile is to be paid—running powers of other railways, transportation of Government supplies, production of accounts, purchase of all possible supplies in Canada, Government inspection, etc. Following are the lines to be aided:

CANADIAN NORTHERN ONTARIO RY.—For a line from Toronto via east side of Lake Simcoe to or near Sudbury, Ont., in lieu of subsidy granted to James Bay Ry., not exceeding 265 miles.

CANADIAN NORTHERN QUEBEC RY.—For a line from near L'Epiphanie, passing by way of St. Jacques de L'Achigan to Rawdon, Que., in lieu of subsidy granted to Chateauguay and Northern Ry., not exceeding 16 miles.

CENTRAL ONTARIO RY.—For an extension from Bancroft to Whitney, Ont., on the Ottawa Division G.T.R., 40 miles.

DOMINION ATLANTIC RY.—For an extension to the Dominion wharf at Canning, N.S., one mile.

EDMONTON, YUKON AND PACIFIC RY.—From Strathcona and Edmonton, Alta., and thence towards Yellowhead Pass, 50 miles.

HAWKESBURY TO SOUTH INDIAN.—For a line between these points in Ontario, 35 miles. The Great Northern Ry. of Canada, now part of the Canadian Northern Quebec Ry., made surveys some years ago for the construction of this line.

INDIAN RIVER RY.—For a line from the north end of Lake Megantic to the International boundary near Riviere Morte, Que., not exceeding 10 miles.

INVERNESS RY. AND COAL CO.—For a line from Cheticamp to between Broad Cove and Point Tupper, N.S., 37 miles.

KLONDIKE MINES RY.—For a line from Dawson to Sulphur Springs, not exceeding 31 miles; for a line from Sulphur Springs to the Divide between Dominion and Flat Creeks, not exceeding 45 miles; for a line from the Divide as above towards the Stewart River, not exceeding eight miles.

LIVERPOOL TO MILTON.—For a line from Liverpool to Milton, N.S., seven miles.

MIDWAY AND VERNON RY.—For a line from Midway to Vernon, B.C., not exceeding 150 miles.

MILTON TO CALEDONIA.—For a line from Milton to Caledonia, N.S., 22 miles.

NICOLA, KAMLOOPS AND SIMILKAMEEN COAL AND RY. CO.—For a line from Spence's Bridge to Nicola Lake, B.C., 47 miles.

NICOLET RIVER BRIDGE.—Towards the construction of a railway bridge over Nicolet River at Nicolet, Que., $15,000.

ORFORD MOUNTAIN RY.—From Bolton line to Massonville, Que., 7.54 miles; from Massonville to the International boundary, 3.12 miles; from Windsor Mills to Brampton Falls, eight miles; from Melbourne road crossing to Melbourne village, 3.5 miles; from some convenient point on the main line to Bonella Lake, five miles; total in all not to exceed 27 miles.

ST. JOHN VALLEY RY.—From Welsford or Westfield to Gagetown, N.B., 30 miles.

ST. JOHN VALLEY AND RIVIERE DU LOUP RY.—From Fredericton to Woodstock, N.B., 58 miles.

ST. PHILIPPE D'ARGENTEUIL TO BROWNSVILLE.—For a line near the intersection of the C.P.R., and the Canadian Northern Quebec Ry. near St. Philippe D'Argenteuil, northerly through Brownsville, Que., 4.2 miles.

STE. ROSE TO ORANGEDALE.—For a line from Ste. Rose to the Intercolonial Ry. near Orangedale, not exceeding 34 miles; from the I.C.R. between Orangedale and Point Tupper to Caribou Cove or Inhabitants Bay or River, N.S., not exceeding four miles.

TILLSONBURG, LAKE ERIE AND PACIFIC RY.—From Woodstock to Berlin, or from Ingersoll to Stratford, Ont., or to any point on the G.T.R. between Berlin and Stratford, 35 miles.

WELLINGTON TO UNION BAY.—For a line from Wellington to Union Bay, B.C., not exceeding 55 miles.

WOODSTOCK TO INTERNATIONAL BOUNDARY.—From Woodstock, N.B., to the International boundary, 26 miles.

WINNIPEG BEACH TO GIMLI.—For a line from Winnipeg Beach to Gimli, Man., not exceeding 11 miles.

YORK AND CARLETON RY.—For a line from its present terminus westerly, not exceeding five miles.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624 400	417,800	206,600	96,400+
Oct...	815,100	490,000	325 100	66,000+
Nov..	741,700	481,300	260,400	35 300+
Dec..	536,200	407,800	128,400	138,800−
Jan..	351,400	410,300	58,900−	8,500−
Feb.	333,200	363,600	30,400−	113,900−
	$4,600,700	$3,372,400	$1,228,300	$ 55 600+

Approximate earnings for Mar., $488,800, against $441,600 for March, 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033 42+
Aug.	6 170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122 94	98,188.05−
Dec.	5 992,098.07	3,726,503.73	2,265,594.34	80,988 97−
Jan.	4,205,527.07	3,657,199.46	548,327.61	718,906.41 −
Feb.	4,268 206.74	3,646,218.62	621,988.12	583,755.66−
	$45,938,207.88	$30,182,025.45	$15,756,182.43	$1,095,805.53+

Approximate earnings for March, $6,098,000, against $5,051,000 for March, 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Feb. $216,131.57; net earnings, $39,613.58; against $204,559.29 gross and $40,491.03 net for Feb., 1906. Net earnings for eight months ended Feb. 28, $660,836.41 against $679,943.82 for same period, 1905-06. Approximate earnings for March, $259,384 against $251,688 for March, 1906.

MINERAL RANGE RY.—Approximate earnings for March, $69,360 against $66,362 for March, 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Feb., $702,339.21; net earnings, $123,744.03, against $764,745.35 gross and $322,409 08 net for Feb. 1906. Net earnings for eight months ended Feb. 28, $3,636,822.34 against $4,174,575.69 for same period 1905-06. Approximate earnings for March, $962,424, against $911,288, for March, 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for Feb. as compared with Feb., 1906.

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$2,074,000	$1,953,603
Expenses	1,687,000	1.607,487
Net earnings	$ 387,000	$ 346,116

CANADA ATLANTIC RAILWAY.

Earnings	$ 124,300	$ 117,878
Expenses	135,800	108,195
Net earnings (def.)	$ 11,500	$ 9,683

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 419,400	$ 404,200
Expenses	388,100	366,700
Net earnings	$ 31,300	$ 37,500

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 123,800	$ 126,853
Expenses	112,600	106,780
Net earnings	$ 11,200	$ 20,073

Approximate earnings for March, $3,571,270, against $3,268,011 for March, 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to March 31.

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£1,502,630	£1,371,434	£131,196	....
Canada Atlantic	81,166	80,901	265	....
G. T. Western	290,586	267,123	23,463	....
D. G. H. & M.	88,760	81,926	6,834	....
Total	£1,963,142	£1,801,384	£161,758	....

Ontario Taxation of Transportation Companies, Etc.

The public accounts for Ontario for the year 1906 give the amount of taxation imposed upon transportation companies by the Legislature and collected during the year. Steam railways paid $376,364.84; electric railways, $8,944.50; express companies $5,325; telegraph companies, $1,317.24; telephone companies, $6,361.13. Following are details:

STEAM RAILWAYS:	
Bay of Quinte Ry.	$ 1,405.12
Brockville, Westport and N. Western Ry. (for 1905)	675.00
(for 1906)	675.00
Canada Atlantic Ry.	20,840.08
Canadian Pacific Ry.	124,686.84
Canadian Northern Ry.	14,140.00
Canada Southern Ry.	25,940.80
Central Ontario Ry.	2,019.00
Grand Trunk Ry.	168,535.60
Kingston and Pembroke Ry.	1 546.50
Lake Erie and Detroit River Ry.	13,348.20
Niagara, St. Catharines and Toronto Ry.	285.00
Nosbonsing and Nipissing Ry.	82.50
Ottawa and New York Ry.	825.00
Thousand Islands Ry.	94.95
Toronto, Hamilton and Buffalo Ry.	1,265.25
ELECTRIC RAILWAYS:	
Brantford St. Ry. (for 1905)	$ 154.40
Guelph Radial Ry.	120.00
Galt, Preston and Hespeler St. Ry.	92.00
Hamilton, Grimsby and Beamsville E. Ry.	97.50
Hamilton St. Ry.	405.54
Hamilton and Dundas St. Ry.	42.42
Hamilton Radial E. Ry.	136.44
International Ry.	341.90
Kingston, Portsmouth & Cataraqui E. Ry.	120.21
London St. Ry.	394.30
Oshawa Ry.	67.50
Ottawa Electric St. Ry.	887.40
Preston and Berlin St. Ry.	103.75
Port Dalhousie, St. Catharines and Thorold E. Ry.	92.00
Sandwich, Windsor and Amherstburg Ry.	300.00
Toronto Ry.	5,114.44
Toronto and York Radial Ry.	396.60
Niagara Falls, Wesley Park and Clifton Tramway Co.	78.10
EXPRESS COMPANIES:	
American Express Co.	$ 925.00
Canadian Express Co.	1,800.00
Dominion Express Co.	1,800.00
United States Express Co.	800.00
TELEGRAPH COMPANIES:	
North American Telegraph Co.	$ 125.00
Dominion Telegraph Co.	475.00
Montreal and G.N.W. Telegraph Co.	717.24
TELEPHONE COMPANIES:	
Bell Telephone Co. of Canada	$6,250.00
Haileybury, Cobalt Telephone Co.	3.62
North American Telegraph Co.	100.00
Temiskaming Telephone Co.	7.51
MISCELLANEOUS:	
Pullman Co.	$1,748.33

The G.T.R., the C.P.R. and the Canadian Northern Ry. have joined forces for the purpose of building a permanent structure at the Exhibition Grounds, Toronto, at a cost of $50,000. The building, which will contain three octagonal structures, connected one with the other, will be constructed of brick, stone and steel. G. W. Gouinlock, Toronto, is the architect.

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MAINLY ABOUT PEOPLE.

L. Malcolm, M.A., has been appointed City Engineer of Stratford, Ont.

H. Folger, who has acted as U.S. Vice-Consul at Kingston, Ont., since 1873, has retired.

Mrs. Wm. C. Hall, wife of the ex-Superintendent Eastern Division C.P.R., died in Quebec recently.

Lady Shaughnessy and Miss Shaughnessy are in Great Britain, where they will remain for some months.

H. S. Heydon, formerly New York agent Canada Atlantic Ry., is now engaged in the Arizona copper industry.

J. R. Booth, who constructed the Canada Atlantic Ry., celebrated the 81st anniversary of his birth, April 5, at Ottawa.

Mrs. I. Gibson, who died at Beamsville, Ont., recently, was mother of Hon. W. Gibson, railway contractor, Beamsville.

Miss Winnifred Jaques, daughter of Mrs. G. E. Jaques, Westmount, Montreal, was married there April 25 to R. H. Dawson.

G. Swain, for a number of years C.P.R. station master at Winnipeg, and recently retired, celebrated his 81st birthday, Mar. 28.

A. Belbeck, who has resigned his position as Superintendent C.P.R. Terminals at Winnipeg, will not, it is said, re-enter railway service.

R. J. Smith, who has been general agent in Winnipeg for the Great Northern Ry., U.S., since 1897, has resigned to go into private business.

The estate of the late Lieut.-Col. R. R. McLennan, of Cornwall, Ont., formerly a railway contractor, was valued for probate at $398,000.

S. S. McCrea, customs broker, who died at Buffalo, N.Y., April 17, aged 62, from pneumonia, was for 15 years G.T.R. freight agent there.

H. D. Bayne, Montreal representative of the Canadian Westinghouse Co., sailed from St. John, April 5, for a two months' trip to Great Britain.

W. R. Tiffin, Superintendent Northern Division G.T.R., has returned to Allandale, Ont., after spending some time in British Columbia and California.

J. Charlton, President Tillsonburg, Lake Erie and Pacific Ry., which has been leased to the C.P.R., was married at Lynedoch, Ont., April 6, to Miss C. Owen.

Hon. J. H. Howden, Minister of Railways and Telephones, of Manitoba, was re-elected by acclamation as member of the provincial Legislature for Neepawa.

Mrs. D. McNicoll, wife of the Vice-President of the C.P.R., together with a son and daughter, sailed on the Empress of Britain, April 6, for Great Britain.

F. H. Small, who at one time was travelling passenger agent C.P.R., Montreal, died at Bangor, Me., April 5. He had been ill for over a year with paralysis.

C. A. Nimmo, who recently resigned the General Passenger Agency of the Rutland Rd., will be associated with his brother in a fruit business in California.

C. C. Morris, Superintendent of railways and docks for the Dominion Iron and Steel Co., has returned to Sydney, N.S., from a two months' tour in Europe.

Mrs. M. A. Morine, who died recently at Macleod, Alta., was mother of H. A. Morine, General Agent of the Port Hood Richmond Ry. Coal Co., at Halifax, N.S.

Wm. Thomson, who died in Toronto, April 6, aged 76, was interested in the construction of the old Northern Ry., and was subsequently President of the company.

P. J. Myler, Vice-President and Managing Director Canadian Westinghouse Co., has been re-elected people's warden of Christ Church Cathedral, Hamilton, Ont.

J. J Forbes was presented with a purse of gold by the business men of Guelph, Ont., recently, on being promoted to the position of G.T.R. agent at Brantford, Ont.

By the will of the late Mrs. Lumsden, widow of A. Lumsden, lumberman and shipowner, Ottawa, $50,000 is left to the Protestant General Hospital, Ottawa.

F. H. Mackey, K.C., Montreal, well known in connection with railways and other corporate legislation, etc., is announced as being engaged to Miss Laura Toller, of Ottawa.

G. A. Davidson, who was I.C.R. ticket agent at Windsor, N.S., in 1886, has resigned his position as Auditor of the Atcheson, Topeka, and Santa Fe Ry. Coast Lines, Los Angeles, Cal.

F. Nicholls, Vice-President Canadian General Electric Co., Toronto, is in London, Eng., in connection with the various electrical development companies in which he is interested.

G. H. Ham, of the C.P.R. headquarters staff, left Montreal Mar. 28, for a trip to Mexico for the benefit of his health. He expects to return to Montreal about the middle of May.

G. B. Hughes, of the Canadian Northern Ry. engineering staff, has been appointed to a position in Monterey, Mexico, in connection with one of the companies in which Wm. Mackenzie is interested.

Sir Wm. C. Van Horne left Montreal for Guatemala, early in April, in connection with the approaching completion of the 200 miles of railway from Port Barrios to Guatemala, in which he is interested.

Col. J. M Gibson, President of the Dominion Power and Transmission Co., Hamilton, Ont., has been appointed to take command of the Canadian rifle team which will visit Bisley, England, in July.

J. N. McIlhargey, in the service of the Canadian Northern Ry. at Port Arthur, Ont., who died there recently, was for some time Trainmaster on the Toronto, Hamilton and Buffalo Ry., Hamilton, Ont.

A. O. R. Huddell, cashier G.T.R., Montreal, was presented with a portrait of himself by the officials of the Treasurer's department, on the recent completion of his fiftieth year of service with the company.

One of the last letters written by the late Dr. Drummond, the poet, who died at Cobalt, Ont., April 10, was to S. W. Foster, Knowlton, Que., President Orford Mountain Ry., in acknowledgment of a pass over that line.

J. McLellan was presented with a couple of arm chairs and an oak cabinet by the C.P.R. freight department officials at Winnipeg, April 2, on the occasion of his promotion to the position of Superintendent of Terminals there.

Miss E. Dunsmuir, daughter of Jas. Dunsmuir, Lieut.-Governor of British Columbia, and principal owner of the Wellington Colliery Ry. on Vancouver Island, was married in London, Eng., April 15, to J. Hope.

W. Mackenzie, President Canadian Northern Ry., Toronto, and W. Harty, M.P., President Canadian Locomotive Co., Kingston, Ont., have been elected by the graduates as trustees for Queen's University, Kingston.

C. M. Hays, Second Vice-President and General Manager G.T.R., returned to Montreal April 15, from London, Eng., where he had been to meet the directors prior to the half-yearly meeting of shareholders, held April 11.

Hon W. S. Fielding is acting as Minister of Railways and Canals, owing to the resignation of Hon. H. R. Emmerson: and Hon. J. Templeman is acting Minister of Marine, during the absence in England of Hon. L. P. Brodeur.

Jas C. Robertson, who died at Sharon, Mass., Mar. 27, aged 63, was manager of the Harris Car Works, at St. John, N.B., and since the amalgamation with Rhodes, Curry & Co., at Amherst, N.S., has been a director of that company.

J. N. Sutherland was presented with a purse of gold by the C.P.R. freight staff and other transportation officials at St. John, N.B., April 5, on the occasion of his retirement from railway service. He will reside at Thornhill, Ont.

David McWood, who had been for about 50 years employed in the cabinet making shops of the G.T.R., Montreal, died at Point St. Charles, Mar. 30, aged 73. He was a brother of W. McWood, Superintendent G.T.R. Car Department, Montreal.

G. A. Grant, who has been appointed Secretary-Treasurer of the Quebec Cartage and Transfer Co., was presented with a gold locket and chain by the office staff of the Dominion Transport Co., Montreal, on leaving that city to take up his new duties.

Miss Marjorie Baker, daughter of the Assistant to the President C.P.R., was married in Montreal April 18, to H. Turnbull. The bride and bridegroom sailed by the Empress of Ireland to spend their honeymoon in Europe. They will reside in Collingwood, Ont.

J. Vaughan, Superintendent district 2 and Montreal Terminals, Eastern Division, C.P.R., was entertained at dinner, April 6, by members of the C.P.R. operating staff at Montreal, on his leaving that company's service to become Superintendent of Terminals for the Montreal Harbor Commission.

The estate of the late N. Dyment, Barrie, Ont., was valued for probate recently, at $1,594,000. It included 111 shares in the Goderich Elevator Co.; 350 shares in the Nova Scotia Steel and Coal Co.; 1,000 shares in the Canadian General Electric Co., and 23 bonds of the Port Hood Coal Co.

J. D. Sullivan, Superintendent Halifax and South-Western Ry., Bridgewater, N.S., died there April 11, aged 38, after three days' illness of pneumonia. Prior to his appointment to the H. and S. W. Ry., in 1905, he was in the C.P.R. service at Montreal, his last work for that company being in connection with the revision of train rules.

R. Bickerdike, M.P., Montreal; D. B. Hanna, Third Vice-President Canadian Northern Ry., Toronto; Z. A. Lash, K.C., Toronto; F. Nicholls, Vice-President and Managing Director Canadian General Electric Co.; and Sir Henry M. Pellatt, Toronto, have been elected directors of the British American and Western Assurance Companies.

The Eastern Canadian Passenger Association at its recent meeting in Montreal, passed a resolution of regret that C. A. Nimmo, General Passenger Agent Rutland Rd., had retired from transportation service, and congratulating F. E. Barbour, General Agent of the New York Central Lines in Montreal, on his promotion to succeed Mr. Nimmo.

W. H. Walker, General Auditor, G.T.R., is spending a holiday on the Mediterranean shores, and will visit London, Eng., to consult an oculist, prior to returning to Montreal. Reports were recently current in Montreal that on account of his eyesight Mr. Waker would shortly resign his position, but officials of the company there state that there is no foundation for the reports.

Thos. Tait, Chairman of the Victorian State Railway Commission and his fellow commissioners, have been re-appointed for

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a further term of four years. Mr. Tait is on his way to Canada from Melbourne, travelling via England, on an extended holiday and is expected to reach Montreal early in July. Mrs. Tait, who was in Canada a short time ago visiting her parents, is now in Paris, France.

The Y.M.C.A. at Ottawa has raised $200,000 for the purpose of erecting a building for carrying on its work there. Among the subscribers are W. C. Edwards & Co., steamboat owners, etc., $20,000; J. R. Booth, formerly President Canada Atlantic Ry., and now a director of the Grand Trunk Pacific Ry., $10,000; Lord Strathcona, Mackenzie, Mann & Co. (Ltd.), $5,000 each; W. Y. Soper, Ottawa Electric Ry., $2,000.

Mrs. Scott Griffin, wife of the Superintendent Canadian Northern Express Co., and the Canadian Northern Telegraph Co., Winnipeg; Mrs. A. M. Grantham, wife of the Superintendent of Construction and Purchasing Agent Toronto Ry., and Misses Mackenzie, are to be presented at the May Drawing Room at Buckingham Palace, London, Eng. They are all daughters of W. Mackenzie, President Canadian Northern Ry.

F. H. McGuigan, who resigned his position as Fourth Vice-President G.T.R., was entertained at dinner at the Canada Club, Montreal, by the officials of the company, Mar. 30, on the occasion of his leaving to become First Vice-President Great Northern Ry., St. Paul, Minn. W. Wainwright, Comptroller, presided, and the health of Mr. McGuigan was proposed by E. H. Fitzhugh, Third Vice-President.

J. M. McKay, who has been appointed Trainmaster C.P.R., at Souris, Man , was born at Tiverton, Ont., Mar. 13, 1868, and entered railway service in 1895, his record being: Sept., 1895, to May, 1897, brakeman, Northern Pacific Rd., Winnipeg; May, 1897, to Sept., 1899, brakeman, C.P.R., Winnipeg; Sept., 1899, to Mar., 1906, conductor, C.P.R., Winnipeg; Mar., 1906, to Mar., 1907, Trainmaster, district 2, Central Division, C.P.R., Winnipeg.

A. A. Schantz, who has been appointed General Manager of the Detroit & Cleveland Navigation Co., and of the Detroit & Buffalo Steamboat Co., had been General Superintendent and Passenger Traffic Manager of these companies since Nov., 1903. He has been for a long time in the service of the former company, having been appointed Assistant General Passenger Agent, Feb. 5, 1891; General Passenger and Ticket Agent in March, 1892, and General Passenger Traffic Manager in Feb., 1903.

At the Anglican vestry meetings held in Toronto recently, J. H. G. Hagarty, Manager St. Lawrence and Chicago Steam Navigation Co., was re-appointed rector's warden St. James' Cathedral; B. W. Folger, Manager Niagara Navigation Co., was elected a sidesman of St. Paul's church: D. D'E. Cooper, Canadian Freight Agent Lehigh Valley Rd., was re-appointed rector's warden of St. Paul's church, and R. M. Melville, steamship agent, was re-elected people's warden of St. Stephen's church.

O. O. Winter, who has been appointed General Superintendent G.T. Pacific Ry. at Winnipeg, Man., was born in Ohio in 1856, and entered railway service as a brakeman on the Chicago, Rock Island and Pacific Rd., 1872, and was subsequently yardmaster. After some years' service with small lines in the Southern states he became Superintendent Great Northern Ry., U.S., in 1892, and later was appointed Assistant General Superintendent, subsequently becoming General Manager, Brainerd and Northern Minnesota Rd., which position he resigned in 1903. He then entered the C.P.R. service, serving successively as Assistant Superintendent of Terminals, Winnipeg; Assistant Superintendent district 2, Central Division, and latterly Assistant Superintendent district 3, Central Division.

F. W. Peters, whose portrait appears on the first page of this issue, was born at St. John, N.B., Mar. 25, 1860, and entered railway service in 1873, as telegraph operator with engineers on construction I.C.R., and from 1873 to 1876 acted as agent at Jacquet River and other points, same road; 1876 to 1878, assistant agent at Newcastle, N.B., same road; 1878 to 1880, agent Chatham Jct., N.B., same road; 1880 to Nov., 1881, relieving agent Chicago and Grand Trunk Ry., Fort Gratiot, Mich.; Nov., 1881, to May, 1882, billing clerk local freight office C.P.R., Winnipeg; May, 1882, to April, 1889, agent C.P.R., Brandon, Man.; April, 1889, to June, 1889, agent C.P.R. Fort William, Ont.; June, 1889, to Nov., 1896, local freight agent C.P.R. Winnipeg; Nov., 1896, to 1899, District Freight Agent, C.P.R., West Kootenay district, Nelson, B.C.; 1899 to Dec., 1900, Assistant General Freight Agent, same territory; Dec., 1900, to July, 1901, Assistant General Freight Agent, Pacific Division, C.P.R., Vancouver; July, 1901, to Dec. 31, 1902, General Freight Agent, same division; Jan. 1, 1903, to date, Assistant Freight Traffic Manager Western Lines, same road

J. G. Sullivan, who has been appointed Manager of Construction, C.P.R., Eastern Lines, with office at Toronto, was born at Bushnell's Basin, N.Y., Jan. 11, 1863, and graduated C.E. at Cornell University, June, 1888. He entered railway service in 1888, his record being: July, 1888, to Mar., 1889, rodman, Great Northern Ry., U.S.; April, 1889, to Aug., 1890, rodman, instrumentman and assistant engineer Spokane Falls and Northern Ry.; Aug., 1890, to May, 1893, assistant engineer, Great Northern Ry. (U.S.) coast lines; July, 1893, to Feb., 1894, assistant engineer, Alberta Ry. & Coal Co.; July, 1894, to Oct., 1894, section foreman, Northern Pacific Ry.; Oct., 1894, to April, 1895, locating engineer, Butte, Anaconda & Pacific Ry.; April, 1895, to Dec., 1895, division engineer, Kaslo & Slocan Ry.; April, 1895, to Feb., 1901, locating and reconnaissance engineer and engineer in charge construction, Columbia & Western Ry.; Feb., 1901, to Sept., 1905, division engineer, construction department, Western Lines, C.P.R.; Sept., 1905, to Feb., 1907, assistant chief engineer, Panama Canal. He was elected a member of the American Society of Civil Engineers in 1899, and is also a member of the Canadian Society of Civil Engineers.

Transportation Companies and Chinese.—The Canadian Customs regulations respecting the transportation of Chinese in bond through Canada have been revised. The new regulations provide that the steamship company or railway must deposit with the Government bonds or currency equal to the full capitation tax in respect of the Chinese in transit. The ports of exit are Victoria, Vancouver, B.C.; North Portal, Sask.; Athelstan, Abercorn, Que.; St. John, N.B.; North Sydney, N.S.; and during the summer months Montreal and Quebec. The manifest must show the name and full descriptions of the persons named, and the U.S. certificates must be attached when the men are bound therefor. They are not to be considered delivered by the transporting company until officially accepted by the U.S. officials. The men must be kept in the same car from ocean port to port of exit, and cars and buildings for their accommodation must be provided with all sanitary conveniences.

The act providing for the establishment of a pension fund for its employes, by the G.T.R., was passed at the recent session of the Dominion Parliament.

TRANSPORTATION APPOINTMENTS.

Board of Railway Commissioners.—A. Frank Dillinger, formerly a superintendent on the C.P.R. Western Lines, has been appointed Operating Assistant to the Chief Traffic Officer of the Board of Railway Commissioners.

Buffalo, Rochester and Pittsburg Ry.—E. J. Devans has been appointed Superintendent of the Buffalo and Rochester Divisions, in place of J. McGarvey, who has been granted leave of absence on account of ill-health. Office, Rochester, N.Y.

Canadian Lake Line.—The following appointments have been made: General Manager, F. Plummer, Toronto; Traffic Manager, H. A. Young, Toronto; General Agents, J. M. Brown, Montreal; C. C. Philpott, Cleveland, Ohio; J. J. O'Connor, Port Arthur, Ont., Agent; G. A. Boyd, Sault Ste. Marie, Ont.; Northwest Agent, J. McLerie, Winnipeg; Soliciting Freight Agents, J. J. Nelligan, Montreal; E. C. Boland, Toronto; E. J. Jordan, Hamilton, Ont.

Canadian Northern Ry.—A. Brunton, heretofore passenger conductor, has been appointed Trainmaster, with headquarters at Dauphin, Man.

Canadian Pacific Ry.—The position of Superintendent district 2, Eastern Division, becoming vacant April 1, through the resignation of J. Vaughan, who has been appointed Superintendent of Terminals for the Montreal Harbor Commission, will not be filled, but Assistant Superintendent R. W. McCormick has been removed from Smith's Falls to Windsor St., Montreal, and will report direct to the General Superintendent.

W H. Dummert has been appointed locomotive foreman at Chapleau, Ont., succeeding H. G. Reid, transferred.

C. Kyle has resumed duty as Master Mechanic of the Eastern Division.

C. A. Stark, heretofore assistant master mechanic Lake Superior Division, has been appointed master mechanic. Office, North Bay, Ont.

H. G. Reid, heretofore locomotive foreman, Chapleau, Ont., has been appointed district master mechanic district 1, Lake Superior Division, at North Bay, Ont.

Alex. Gray, formerly with the staff of the 5th Division, has been appointed Resident Engineer Ottawa Division.

F. L. Lamplough, heretofore Chief Dispatcher at Ottawa, has been appointed Trainmaster, district 30, with office at Ottawa. He will have jurisdiction over all employes in station, train and yard service.

R. Ferguson has been appointed road-master of Fort William, Ont., terminals. This is a new position.

F. T. Anderson has been appointed Car Distributor Central Division, with headquarters at Winnipeg. His duties are to regulate the distribution of cars between districts and to handle the detail work in connection with enquiries as to the local car supply on such districts.

Jno. McLellan, heretofore local freight agent Winnipeg, has been appointed Superintendent of Winnipeg Terminals, succeeding A. Belbeck, resigned.

H. G. Coram, heretofore city freight agent, Winnipeg, has been appointed local freight agent there, succeeding J. McLellan, promoted.

D. C. MacDonald has been appointed city freight agent at Winnipeg, vice H. G. Coram, transferred

J. Hulme, who was until recently Train-

(Continued on page 343.)

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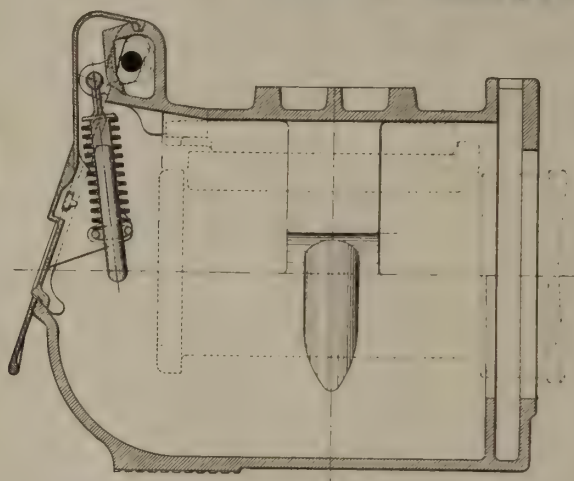

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TRANSPORTATION APPOINTMENTS.

(*Continued from page 339*)

master at Moose Jaw, Sask., has returned to his former position as conductor on district 2, Central Division.

J. Canty, heretofore roadmaster at Regina, Sask., has been appointed roadmaster of the Miniota and Lenore branches, Rapid City section, and Brandon terminals, with headquarters at Brandon, Man.

L. Kinshella has been appointed Bridge and Building Master, district 4, Central Division, with headquarters at Souris, Man.

J. Hallonquist has been appointed roadmaster Moose Jaw section, succeeding P. A. Benson, transferred to the Swift Current section, heretofore in charge of J. Hallonquist. These roadmasters have their headquarters at Moose Jaw, Sask.

C. Millard, heretofore chief clerk to Assistant General Passenger Agent Pacific Division, has been appointed station ticket agent Vancouver, B.C., relieving W. R. Thomson, of Vancouver station work.

H. J. Miller has been appointed chief clerk to Assistant General Passenger Agent, Vancouver, B.C., vice C. Millard, promoted.

M. E. Malone has been appointed Travelling Passenger Agent at Cincinnati, Ohio.

E. E. Penn has been appointed General Agent Passenger Department. Office, Jas. Flood Building, 77 Ellis St., San Francisco.

S. Gordon, recently acting manager in charge of the Royal Alexandra Hotel, Winnipeg, has been appointed Manager of the new Empress Hotel at Victoria, B.C. A manager to succeed W. Taylor at Winnipeg has not yet been appointed. Following are the managers of the other C.P.R. hotels: The Algonquin, St. Andrews, N.B., A. Allerton. McAdam Junction Hotel, N.B., Miss F. Grant. Chateau Frontenac, Quebec, J. H. Phillips. Place Viger Hotel, Montreal, R. Graves. Caledonia Springs Hotel, Ont., J. McGuire. Moose Jaw Hotel, Sask., Mrs. J. M. Young. Lake Louise Chalet, Laggan, B.C., Miss J. Mollison. Mount Stephen House, Field, B.C., H. Chancellor. Emerald Lake Chalet, near Field, B.C., Miss A. Hawthornthwaite. Glacier House, Glacier, B.C., S. Flindt. Vancouver Hotel, B.C., H. W. Willis. Banff Springs Hotel, F. F. Danforth.

Chicago, Milwaukee and St. Paul Ry.—W. B. Dixon, heretofore Northwest Passenger Agent at St. Paul, Minn, has been appointed Assistant General Passenger Agent. Office, St. Paul, Minn.

R. D. Rovig has been appointed Northwest Passenger Agent, succeeding W. B. Dixon, promoted. Office, St. Paul, Minn.

Delaware and Hudson Co.—L. F. Loree, chairman of the Executive Committee of the Kansas City Southern Ry., has been elected also President D. and H. Co., succeeding D. Wilcox, resigned on account of ill-health.

E. J. Triay, Jr., has been appointed Division Freight and Passenger Agent, Champlain Division. Office, Plattsburg, N.Y.

G. E. Bates has been appointed Division Freight and Passenger Agent, Saratoga Division. Office, Troy, N.Y.

E. E. Hilton, of Montreal, has been appointed Travelling Freight Agent, Champlain Division, D. and H. Rd.

Detroit and Cleveland Navigation Co.—P. H. McMillan has been elected President, succeeding Wm. C. McMillan, deceased.

Erie Rd.—H. E. Huntington, heretofore General Agent Passenger Department, Cincinnati, Ohio, has been appointed General Agent Passenger Department, Buffalo, N.Y., succeeding H. T. Jaeger, deceased.

Grand Trunk Pacific Ry.—O. O. Winter, heretofore Superintendent C.P.R., Brandon, Man., has been appointed General Superintendent G.T.P. Ry. Office, Winnipeg The circular is signed by M. C. Sturtevant, General Assistant

Grand Trunk Ry.—F. H. McGuigan, Fourth Vice-President, having resigned to enter the service of another company, all officials heretofore reporting to the Fourth Vice-President, will, until further notice, report to E. H. Fitzhugh, Third Vice-President, Montreal.

G. McIntosh has been appointed air brake instructor, succeeding A. Wright, resigned. Headquarters, Montreal.

The office of Assistant Superintendent at Island Pond, Vt., has been abolished.

J. J. Connelly, heretofore Trainmaster at Richmond, Que., has been appointed Trainmaster districts 1, 2 and 3. Office, Island Pond, Vt.

W. E. Watt has been appointed Assistant Trainmaster districts 2 and 3. Office, Richmond, Que.

C. L. Mayne having resigned, the office of Superintendent of Terminals, Montreal, is abolished.

H. F. Coyle, heretofore Assistant Superintendent Island Pond, Vt., has been appointed Assistant Superintendent at Montreal, in charge of Montreal Terminals, and will have jurisdiction over district 4.

R. Ivers, heretofore locomotive foreman at London, Ont., has been transferred to a similar position at Turcot, Montreal

S. Ennes, Assistant Superintendent, Ottawa Division, having resigned, the position has been abolished.

F. L. Lamplough has been appointed Trainmaster district 30. Office, Ottawa, Ont. He has jurisdiction over all employes in station, train and yard service.

J. S. McAdam has been appointed Chief Train Dispatcher at Ottawa, Ont., vice F. L. Lamplough, transferred.

E Fisher has been appointed locomotive foreman at Belleville, Ont., vice J. R. Donnelly, promoted.

E. L. Cousins has been appointed Resident Engineer Middle Division, succeeding G. R. MacLeod, resigned. Office, Toronto.

W. H. Farrell has been appointed Acting Superintendent Toronto Terminals, succeeding H H. Brewer, resigned. Office, Union Station, Toronto.

R. G. Gilbridge, heretofore charge hand, York, Ont., has been appointed locomotive foreman at Palmerston, Ont., succeeding J Hay, transferred to London, Ont.

N. B. Walton, Assistant Trainmaster Middle Division, Palmerston, Ont., has resigned.

J. Hay, heretofore locomotive foreman at Palmerston, Ont, has been transferred to a similar position at London, Ont.

Walter White, agent at Black Rock, N.Y., having resigned, W. P. Lyon, heretofore his chief clerk, has been appointed to succeed him.

C. E. Stenton, heretofore contracting freight agent, Detroit, Mich., has been appointed Travelling Freight Agent. Headquarters, Buffalo, N.Y.

The following agents have been appointed: Laprairie, Que., J. L. O. Colombe; White's, Que., J. N. Sauvageau; Huntsville, Ont., R. W. Groves; Guelph, Ont., D. W. Hayes; Burlington Jct., Ont., N. J. Dore; Belle River, Ont., T. R. Reynolds; Brantford, Ont., J. Forbes; Fergus, Ont., H. A. Chalmers; Milverton, Ont., G. S. Cline; Aubrey, Que., H. A. McDonnell, acting; Glasgow, Ont., W. A. Graham, acting; Renfrew, Ont, J. W. Berlanquet, acting; Barry's Bay, Ont., C. A. Roberts, acting; Madawaska, Ont., H. B. Partridge, acting.

Great Northern Ry. (U.S.A.)—The following circular was issued April 2 by J. J. Hill, Chairman of the Board: "At a meeting of the Board of Directors held to-day the organization of the company was enlarged by the election of a Chairman of the Board. The following officers were elected: J. J. Hill, Chairman of the Board; L. W. Hill, President; F. H. McGuigan, Vice-President. Mr. McGuigan will have direct charge of matters pertaining to operation. Other officers of the company remaining as heretofore."

H. A. Kennedy, heretofore Assistant General Superintendent Spokane, Wash., has been appointed Assistant General Manager. Office, St. Paul, Minn.

W. C. Watrous has been appointed General Superintendent of Transportation, succeeding R. W. Bryan, appointed General Superintendent, Central Division. Office, St. Paul, Minn.

R. W. Bryan, heretofore General Manager of Transportation at St. Paul, has been appointed General Superintendent Central Division Office, Minot, N.D.

A. Brown has been appointed general roadmaster Central Division, Office, Minot, N.D.

F. S. Forest, heretofore Assistant General Superintendent at Minot, N.D., has been appointed General Superintendent Spokane Falls and Northern Ry., Columbia and Red Mountain Ry., Red Mountain Ry., Nelson and Fort Sheppard Ry.; Washington and Great Northern Ry., and the Vancouver, Victoria and Eastern Ry. and Navigation Co. Office, Spokane, Wash.

The Third District of the Spokane Falls and Northern Ry. has been extended from Molson, Wash., to Oroville, 25.3 miles.

C. Whitfield, heretofore division roadmaster at Whitefish, Mont., has been appointed general roadmaster Western Division, Spokane, Wash.

W. A. Ross, Assistant General Passenger Agent Great Northern Steamship Co., has also been appointed Assistant General Passenger Agent G.N. Ry. at Seattle, Wash., succeeding S. G. Yerkes.

A. Brostedt, heretofore District Passenger Agent at Duluth, Minn., has been appointed District Freight and Passenger Agent at Winnipeg, Man., succeeding R. J. Smith, resigned.

Kingston and Pembroke Ry.—G. G. Hare, heretofore Resident Engineer C.P.R., Woodstock, N.B., has been appointed Engineer K. & P. R., vice T. W. Nash, who resigned owing to advancing age. Office, Kingston, Ont.

Lake Erie and Western Rd.—F. L. Talcott has been appointed General Eastern Agent at Buffalo, N.Y.

R. E. Gavin has been appointed Commercial Agent at Buffalo, N.Y

Lake Shore and Michigan Southern Ry.—F. C. Curry has been appointed Travelling Freight Agent, with headquarters at Buffalo, N.Y., succeeding H G. L. Campbell.

Montreal Harbor Commission.—J. Vaughan, heretofore Superintendent Montreal Terminals and district 2, C.P.R. Eastern Division, has been appointed Superintendent of Terminals for the Commission He will have charge of the operation of railway tracks along the harbor front, over which the commission has previously granted running rights to the various railway companies.

New York Central and Hudson River Rd.—P. E. Crowley, heretofore General Superintendent Western District, Syracuse, N.Y., has been appointed Assistant General Manager, succeeding J. P. Bradfield. Office, New York.

J. H. Heustis, heretofore Division Superintendent, New York, has been appointed General Superintendent Western District, Syracuse, N.Y., succeeding P. E. Crowley, promoted.

C. Hartigan, heretofore Travelling Passenger Agent, Buffalo, N.Y, has been appointed General Agent Passenger Department, succeeding F. E. Barbour, promoted. Office, Montreal

Northern Pacific Ry.—Wm. C. Smith, heretofore Division Engineer, St. Paul, Minn., has been appointed Engineer of Maintenance of Way. Office, St. Paul, Minn.

TELEGRAPH AND TELEPHONE POLES

1,750,000 IN USE IN CANADA

Extract from report of Henry Grinnell, Forest Service, U.S.A.:

"The investigations were confined to the consideration of various methods for protecting that part of the pole most subject to decay i.e., the part immediately above and immediatly below the ground line. . . . . The cost of a green pole at the setting hole may be put at $5.00 and of a treated pole (calculated on the basis of fair prices for labour and a good preservative) at $5.40 and $5.65 respectively, for brush treated and tank treated poles. The average length of life of a green pole is about twelve years, and an increase in the length of service due to treatment of four years in the case of poles treated by the first or brush method, and eight years in the case of poles treated by the third or tank method, is probably a very conservative assumption. . . . . A comparison of these annual charges shows that by using a pole treated by the first method instead of a green pole an annual saving of about seven cents is effected, while if a pole treated by the third method is used the annual saving will be about twelve cents."

A saving to Canadian companies can be effected of from $122,500.00 to $210,000.00 per annum

Carbolineum is the most efficient preservative for poles

CARBOLITE CARBOLINEUM COMPANY, LIMITED

302 Manning Chambers, W. Queen St., - Toronto, Canada

The Longest Continuous Double Track Railway in the World under One Management and the only Double Track Line Between Montreal, Toronto, Niagara Falls, Detroit and Chicago.

GRAND TRUNK RAILWAY SYSTEM

Finest Roadbed in Canada. Modern and Luxurious Trains. Courteous Employees. Beautiful Scenery. The Best of Everything on this Popular Route.

4 FAST TRAINS, TWO EXPRESS AND TWO LIMITED

BETWEEN MONTREAL AND TORONTO, EACH WAY, DAILY

THROUGH TRAINS between BOSTON [via Boston & Main R.R. and Cent. Vermont Ry.] MONTREAL, TORONTO and CHICAGO.
THROUGH TRAINS between NEW YORK, TORONTO and CHICAGO via Lehigh Valley R.R. and Niagara Falls.
Dining, Cafe-Parlor, and Library Cars on Day Trains. Pullman Vestibuled Sleeping Cars on Night Trains.

THE "INTERNATIONAL LIMITED"

The "Railway Greyhound of Canada," the finest and fastest train in the Dominion, runs every day in the year between Montreal and Chicago.

The Lines of this Great System reach all the Principal Cities and Towns in Quebec and Ontario.

W. E. DAVIS, Passenger Traffic Manager, MONTREAL. G. T. BELL, General Passenger and Ticket Agent, MONTREAL, QUE.

McCLINTOCK MANUFACTURING CO.

Manufacturers of

AUTOMATIC BLOCK SIGNAL SYSTEM FOR STEAM & ELECTRIC RAILROADS
ELECTRICAL HIGHWAY CROSSING SIGNALS FOR ELECTRIC ROADS
HIGHWAY CROSSING SIGNALS FOR STEAM ROADS

FOR FURTHER INFORMATION WRITE GENERAL OFFICE

143 EAST 3rd STREET, - ST. PAUL, MINN.

BRANCHES: NEW YORK CHICAGO

Pere Marquette Rd.—Wm Griffith has been appointed acting general foreman St. Thomas, Ont., shops, succeeding F. C. Pickard, resigned.

Quebec, Montreal and Southern Ry.—J. Leslie, heretofore roadmaster G.T.R., Ottawa, has been appointed General Roadmaster Q., M. and S. Ry., Headquarters, Sorel, Que.

T. Brennan will continue to act as roadmaster, reporting to the General Roadmaster.

Rutland Rd.—F. E. Barbour, heretofore general agent at Montreal, has been appointed General Passenger Agent, succeeding C. A. Nimmo, resigned. Office, Rutland, Vt.

C. Hartigan has been appointed General Agent Passenger Department, Montreal, succeeding F. E. Barbour, promoted.

L. E. Vosburg has been appointed General Eastern Passenger Agent at New York.

J. H Jagoe, having been transferred to the New York Central and Hudson River Ry., the office of General Southern Passenger Agent at New York has been abolished.

Toronto and York Radial Railway Cars.

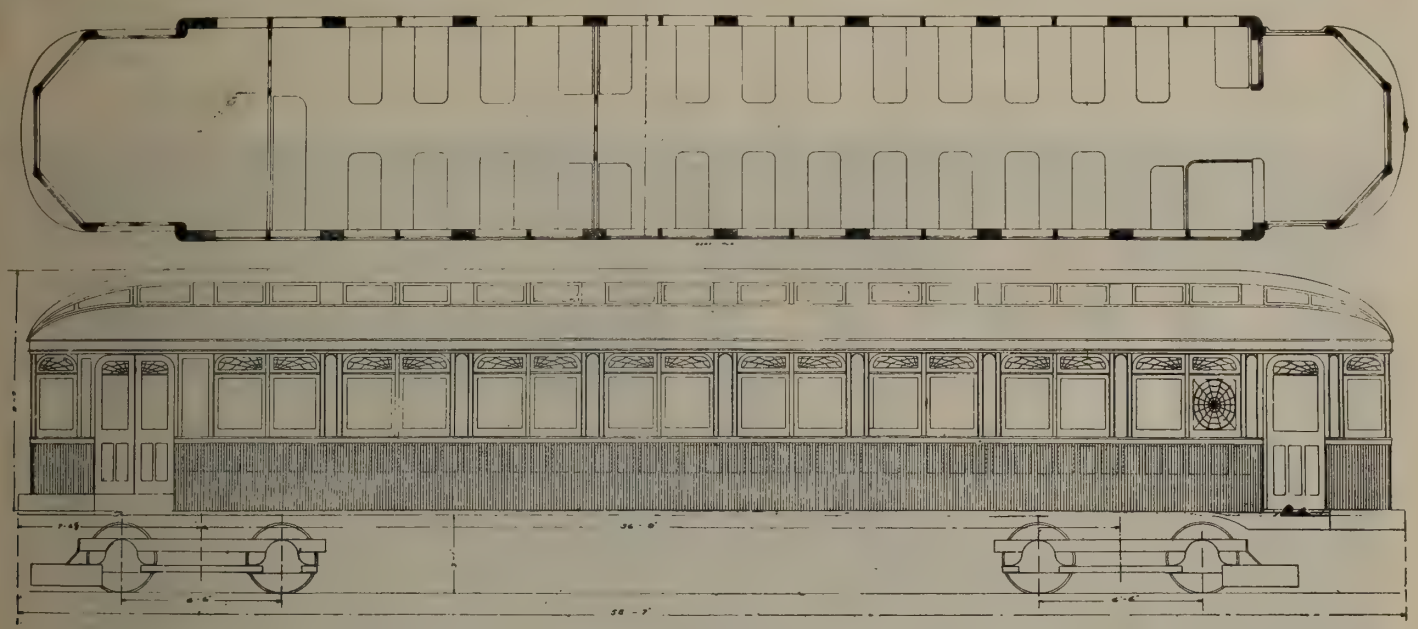
By A. M. Grantham, Superintendent of Construction and Purchasing Agent.

This company is building for the long through run between Toronto and Jackson's Point, the Lake Simcoe terminus of the Metropolitan Division, a distance of about 55 miles, a number of essentially up-to-date cars, constructed especially for speed, comfort, and safety. The sill construction is principally steel, and double floors with several thicknesses of felt between deaden the sound from beneath and add warmth to the car. The seats are high roll-back, rattan-covered "walk overs," and the heating is by hot water pipes from a small furnace in the baggage vestibule. A glance at the plan will show the sub-dividing. The front vestibule, in which the motorman stands, is large enough to carry the heating apparatus, and allows plenty of space for baggage, etc. The smoking room comes next to this, seating 24 persons, and lastly, the main passenger compartment, which seats comfortably about 38 people, and contains lavatory, drinking-fountain, hat-racks, coat-hooks, etc. The interior finish is in antique quarter-cut oak, and all color work, such as the leaded glass transoms, deck lights, etc., are in subdued tones of brown and green, giving to the cars a very restful sensation—in fact they possess all the comforts and conveniences of the modern up-to-date railway coach, and are probably the finest cars of their kind that have yet been put in commission in Canada.

The motor equipment is composed of four of the new G.E. no. 73 machines, of 75 h.p. each, especially designed for this class of work by the Canadian General Electric Co, and giving 300 h.p. per car. The motors are of the box-frame type, and have large bored openings in each end into which the frame heads which carry the armature shaft bearings are bolted. Oily wool waste is packed into the frame head castings, giving lubrication to the shaft through openings cut in the bearing linings, and the motor frame being unsplit, effectively prevents oil or water getting into the motor. The same method of lubrication is employed for the axle bearings. The excellence of this method of lubrication is attested by the fact that the armature shaft bearings have run as much as 137,000 miles before it was necessary to renew the linings. The commutator is of hard drawn copper segments, insulated with the very best quality of mica, and has been proved to have long life and keep its shape well under hard service. In general, the various parts of this motor are of an improved type, and especially designed to withstand the excessive vibration of heavy interurban service, and they successfully meet the demand for rapid acceleration, at the same time enabling the cars to be run at a speed of from 40 to 50 miles an hour on the level, as well as handling the loads with ease on heavy grades.

Perhaps the most interesting feature of these cars is the type M. master control system, which is said to be supplied now for the first time in Canada, by the Canadian General Electric Co. The advantages claimed are simplicity, ease of handling, and flexibility, requiring little effort on the part of the motorman, and a minimum of space in the vestibule of the car. It is also possible with this system, for one motorman to handle a train of motor cars from one controller. Briefly, the type M. consists of a master controller and a motor controller, the latter being located under the car, and not under the direct control of the motorman. It consists of a number of switches electrically operated, called contactors, and their object is to directly handle the power circuits for the motors, that is, to change the electrical connections so as to give the necessary motor connections for starting, running and reversing. The contactors each consist of a switch which cuts in and out the various resistances, powerful and magnetic blow out coils which instantaneously blow out any arc which may form, and an operating coil which opens or closes the switch. The master controller is a small affair, weighing only about 130 lbs., and is placed in the motorman's vestibule. A special feature of this master control is that should the motorman take his hand off the operating handle for any reason, the current is immediately cut off, which is accomplished by means of auxiliary contacts which are operated by a spring when the button in the handle is released. As this master controller can be connected to any number of main motor controllers, a number of cars can be made into a train and operated by one motorman simply by means of cables and couplers.

The accompanying illustrations of these new cars show their general appearance. The total weight of the car equipped with trucks and motors is about 28 tons. Car length over all 55 ft. 7 ins., and width, 9 ft. 3 ins.



ELEVATION AND FLOOR PLAN, TORONTO & YORK RADIAL RAILWAY CARS.

Wabash Rd.—A. Arnum has been temporarily appointed road foreman of engines in place of J. Bell, who is in ill-health. Headquarters, St. Thomas Ont.

The office of J. Hodgson, jr., Foreign Freight Agent, has been removed from Chicago, Ill., to St. Louis, Mo.

West Shore Rd.—P. E. Crowley, Assistant General Manager New York Central and Hudson River Rd., has also been appointed Assistant General Manager, W.S. Rd.

J. H. Heustis, General Superintendent N.Y.C. and H.R. Rd., has also been appointed General Superintendent W.S. Rd. Office, Syracuse, N.Y.

The headquarters of F. W. Everett, Division Superintendent, have been transferred to Syracuse from Buffalo, N.Y.

The authority of J. F. Fairlamb, General Passenger Agent N.Y.C. and H.R. Rd., has been extended over the W.S. Rd., C. E. Lambert having retired on a pension.

L. E. Vosburg, General Eastern Passenger Agent N.Y.C. and H R. Rd., has also been appointed General Eastern Passenger Agent, W.S Rd., succeeding H. B. Jagoe, resigned.

W. S. Randolph, General Agent Passenger Department N.Y.C. and H.R. Rd., Albany, N.Y., has also been appointed General Agent Passenger Department W.S. Rd. there, succeeding A. E. Brainerd.

THE

NEW HOTEL BREVOORT CHICAGO

The Twentieth Century Hotel **Absolutely Fireproof**

Centrally Located. Near-by cars for all Stations. All rooms are outside rooms. Baths Connecting. Restaurant. Grill Room. Buffet. Unsurpassed in Appointments and Decorations. Table Unexcelled. Prices Moderate.

A. D. HANNAH & D. HOGG, PROPRIETORS.

ARTHUR M. GRANT, MANAGER.

THE BARBER TRUCK

IT GIVES THE BOLSTER LATERAL TRAVEL, GREATLY ELIMINATING THE LATERAL FORCES & SHOCKS

IT REDUCES
TRAIN RESISTANCE
WEAR ON WHEEL FLANGES
WEAR ON COUPLER KNUCKLES
WEAR ON JOURNAL BEARINGS

STANDARD CAR TRUCK CO.
Old Colony Bldg. — CHICAGO, ILL., U.S.A.

THE WASHBURN TYPE A FREIGHT COUPLER

A Modern Coupler for modern service. It is the acme of Strength, Simplicity and Durability.

John Taylor, 180 St. James Street, Montreal

Tower Wagon for Overhead Work.

By A. M. Grantham, Superintendent of Construction and Purchasing Agent, Toronto Railway Co.

The Toronto Railway Co. has recently built a gasolene-driven automobile type of tower wagon for overhead construction and repair work. The features of special advantage claimed for a motor truck of this description are speed, steadiness in starting up, ease of motion, despatch in retrograde movement, ability to keep to a straight line in forward or reverse direction, etc., besides the desirability of being independent of horseflesh, and the ability to keep the wagon in service continuously. In point of economy a comparison between a horse-driven vehicle and a gasoline motor would be somewhat as follows:

HORSE DRIVEN VEHICLE

Original cost of 3 horses, team and 1 spare say		$ 750.00
Original cost of 1 wagon and tower		500.00
Total first cost		$ 1,250.00
Annual depreciation on horses, say	$100.00	
Annual depreciation and repairs to wagon	200.00	
Annual keep of horses	500.00	
Harness, etc	50.00	
	$850.00	
Capitalized at 5%		$17,000.00
		$18,250.00

GASOLENE WAGON

Total first cost		$ 3,600.00
Annual repairs to outfit including tires, etc	$300.00	
Depreciation allowing for new outfit in 7 yrs	500.00	
Gasolene and oil consumption	150.00	
	$950.00	
Capitalized at 5%		$19,000.00
		$22,600.00

And, as two gasolene wagons should easily do the work of three horse wagons, there is probably an actual saving financially to be shown in favor of the power outfit, not to mention the convenience in operating and handling, and space saved in stabling horses.

The body and tower of the motor were built by the Toronto Ry. Co. to its own designs which have been found best adapted to conditions. A sketch plan of the arrangement is given, and also an illustration of the motor. The details of the motor chassis imported by the Dominion Automobile Co. of Canada, from Switzerland, are as follows:

TYPE H. 20 H.P. TRUCK

MOTOR (foreign rating)—Two separately cast cylinders, 120 by 140 mm., 16 h.p. when running at 900 revolutions, valves interchangeable and mechanically operated. Patented device for operating admission and exhaust. Minimum revolutions 200, maximum 1,400 revolutions per minute. All working machinery protected from dust. The crank shaft made from the very best chrome nickel steel.

CARBURETTOR—Mechanically operated, and hot water jacketed.

TRANSMISSION—Selective type. Four speeds ahead and one reverse. Direct drive on high speed. All gears made of very best chrome nickel steel.

BRAKES—Three, working independently. One hand lever brake working directly on the hubs of the hind wheels. The second, a ratchet brake, working by pedal on differential. There is a third brake which works very regularly on the motor by means of closing the inlet valves.

DRIVE Bevel gear with spur gears and interior teeth on brake drums.

RADIATOR—Honeycomb, Mercedes type.

AXLES—Both front and rear forged from solid steel.

IGNITION (double)—By high tension magneto and commutator.

PUMP—Gear driven.

WHEELS—Artillery type with solid rubber tires.

CHASSIS—Channel steel.

WHEEL BASE—3 1-5 metre.

STEERING—By irreversible worm and sector.

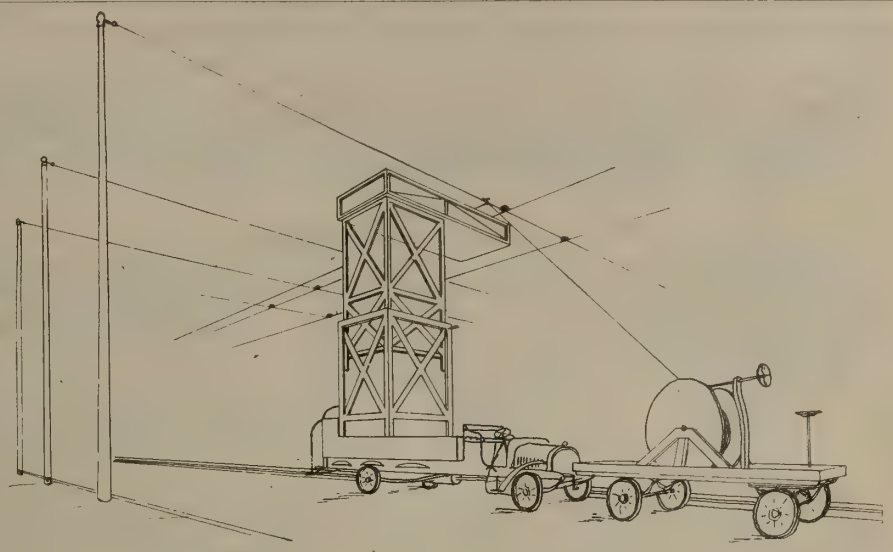
TANK—20 gallons capacity Red copper, riveted and brazed.

WEIGHT—3,200 lbs.

LOAD—2½ tons.

SPEED—3, 6, 10 and 18 miles per hour.

For use in stringing trolley wire, the Toronto Ry. Co. has devised a reel truck with steering handle, that may be either pushed ahead or behind by the motor, and the wire leads from the reel thereon, up over the tower, where it is fastened to the span. While there are expected to be some difficulties to overcome in the operation of this truck, it is believed that it will work out ultimately to be a most expeditious and economical manner of doing the work.



TOWER WAGON AND REEL TRUCK, TORONTO RAILWAY CO.

Electric Ry. Finance Meetings, Etc.

Berlin and Waterloo Street Ry.—By a vote of 863 to 114 the ratepayers of Berlin, Ont., passed a by-law April 5 in favor of the purchase of the Berlin and Waterloo Street Ry. The price fixed by the arbitrators is $75,200, but the company has appealed to the courts against the amount of the award.

British Electric Ry.—Application has been made to the London, Eng., Stock Exchange to grant a quotation for £300,000 of 4½% perpetual consolidated debenture stock, recently sold.

Halifax Electric Tramway.—Railway earnings for Mar. $12,843.83, against $11,651.54 for Mar., 1906.

London Street Ry.—At the conference between the President of the L.S.R. and the finance committee of the London City Council, the former declined to set a price at which the line, its franchises and property could be acquired by the city. There was no objection to the city examining the company's books, and having an expert to value the property, if there was a serious desire to purchase the line.

There were about 50 stockholders who would have to be dealt with. It was agreed that the company was willing to negotiate on the basis of so much for the stock, so much for the intrinsic value of the system and so much for the franchise. In an interview subsequently, Mr. Everett said that the city could not purchase the line at par value. The franchise will not expire until 1925.

Montreal Street Ry.—Passenger earnings for Mar., $267,403.41; total earnings, $271,588.07, against $232,358.70 passenger and $235,396.62 gross for Mar., 1906. Operating expenses, $183,461.32; rent leased lines, $339.96; city percentage on earnings, $16,476.73; interest on bonds and loans, $13,024.79; contingent for renewals, $13,370.17; against no rent leased lines; $12,324.16 city percentage on earnings, $15,573.41 interest on bonds and loans, and $11,765.33 contingent for renewals for Mar., 1906. Surplus for Mar. $42,913.14, against $39,185.31 for Mar., 1906. Gross earnings for six months

GASOLENE DRIVEN TOWER WAGON, TORONTO RAILWAY CO.

NEWMAN A. FULLER, President MAX F. KELLER, Secretary-Treasurer DR. J. EWART BROWN, Vice-President

THE CANADIAN DETECTIVE BUREAU

LIMITED

GENERAL OFFICES:

CROWN LIFE BUILDING, QUEEN & VICTORIA STS.
TORONTO, ONT.

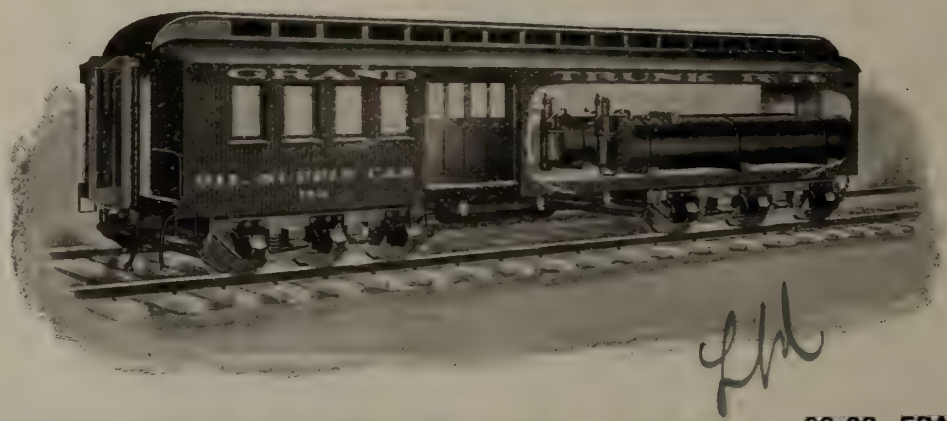
MAX F. KELLER, Gen. Manager WILLIAM H. WELSH, Gen. Superintendent

BRANCH OFFICES—Ottawa, Ont.; Montreal, Que.; St. John, N.B.; Halifax, N.S.; Winnipeg, Man.; Regina, Sask.; Edmonton, Alta.; Vancouver, B.C.; Dawson, Y.T.; New York, N.Y.; London, Eng.; Paris, France.

Cable Address: "CANDEC."

This Bureau is prepared to undertake all legitimate investigations in Criminal, Civil, or Commercial Cases for Transportation Companies, Banking and other Corporations, and for private individuals.——Private Patrols and Special Bank Guards.——Uniformed Patrolmen furnished for Expositions, Race Tracks, etc., and operatives suitable for all classes of detective work.

A BOWSER OIL SUPPLY CAR EQUIPMENT



For Delivering Oil to Signal and Interlocking Towers, Way Stations, etc.

Heavy steel tanks of any desired capacity, with flanged steel heads and baffle plates to prevent splashing and to withstand the severe usage to which tanks are subjected.

These tanks are equipped with Self-Measuring Pumps that draw and accurately measure five gallons at each full stroke, and can be instantly adjusted to pump any desired part of five gallons.

Specially designed cars are not necessary. We can equip any standard car. Send for Bulletin 18.

S. F. BOWSER & CO., Inc. 66-68 FRAZER AVENUE TORONTO, CANADA

THE ESTABLISHED 1854 INCORPORATED 1881

JAMES SMART MFG. COMPANY

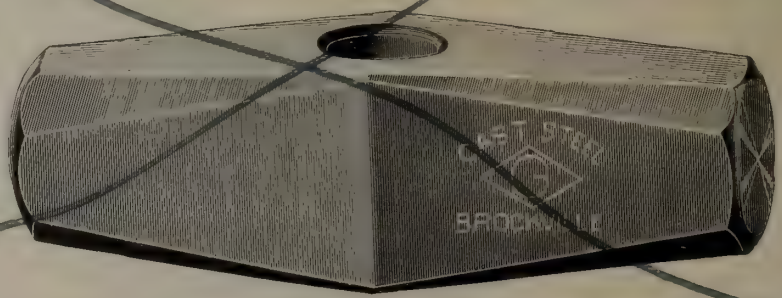
LIMITED

WORKS BROCKVILLE, ONT.

WESTERN WAREHOUSE 131 Bannatyne Ave., WINNIPEG, MAN.

Makers of High Grade

Machinists' Hammers
Track Chisels
Nail Hammers
Jack Screws
Bench Axes



OUR TRADE MARK G

A GUARANTEE OF EXCELLENCE

Stoves, Spike Mauls, Drilling Sledges, Copying Presses
Traversing Jacks, Chopping Axes, Trucks, Pumps, Etc.

Purchasing Agents are invited to send for our Catalogues and Discount Sheets, which will be furnished promptly.

ended Mar. 31, $1,592,048.45; net earnings, $525,391.49; surplus, $286,513.42, against $1,406,322.39 gross earnings, $477,699.83 net earnings, and $299,065.92 surplus for same period 1905-06.

Quebec Ry. Light and Power Co.—The option which the C.P.R. held on the stock of the Q. Ry. L. & P. Co., expired April 16, and not being taken advantage of was cancelled.

St. John Ry.—A French financial syndicate is reported to have made an offer of 135 per share for the stock of the St. John Ry. The company owns the street railway line, and the electric lighting system of St. John, N.B.

Toronto Ry.—Car earnings for Mar., $264,304.42, against $233,813.77 for Mar., 1906.

Electric Railway Notes.

The Port Arthur, Ont., Street Railway Commission has decided to operate its cars on Sundays, until stopped by legal action.

C. Johns was presented with a gold locket by the employes of the St. Thomas, Ont., municipal street railway, on resigning from the position of manager recently.

The Ontario Railway and Municipal Board has decided that in future tests for fenders must be made at the cost of the persons offering the fenders for approval.

The Mayor of Toronto stated to the Board of Control April 10, that W. Mackenzie, President Toronto Street Ry., had informed him that many of the 100 new cars ordered would be put on in the fall.

J. A. Killingsworth, heretofore engaged in newspaper work, has been appointed Manager of the corporation street railway at St. Thomas, Ont., succeeding C. Johns, resigned. Salary $70 a month.

The Winnipeg Street Ry. has refused to put in force the schedule ordered by the City Board of Control, and the Board is considering the question of taking steps to have the penalty clause of the agreement enforced.

Jas. J. Callaghan, who left the Montreal Street Ry. about six months ago to become Superintendent of the St. John, N.B., Street Ry., has resigned and returned to Montreal, where he has been appointed roadmaster of the Montreal St. Ry.

A new schedule of pay goes into force on the Ottawa Street Ry. May 1. One-year men will receive 17½c. an hour for week-days, and 19½c. for Sundays; two-year men, 18½c. and 20½c.; three-year men, 19½c. for week-days and 21½c. for Sundays.

The municipalities of Kildonan, St. Paul, St. Andrew's and Selkirk, Man., met April 4 to discuss the alleged unsatisfactory operation of the Winnipeg, Selkirk and Lake Winnipeg Ry., and a committee was appointed to wait on the directors and endeavor to come to some definite understanding.

The Egerton Tramway Co. has discontinued the running of cars on Sundays a-Stellarton, N.S. owing to another action being taken against one of its employes under the Lord's Day Act. If the people of the municipality desire the cars to be runon Sundays, the company will operate them.

Judgment has been given for the plaintiffs in the action of Nelles and Newman against the Windsor, Essex and Lake Shore Rapid Ry. The plaintiffs were among the original promoters of the company, and when they sold the charter to the Keystone Construction Co., they were to receive $43,000 in first mortgage bonds, and $72,000 in preferred stock. The action was brought to compel the company to carry out the agreement.

The Ottawa, Ont., City Council has given a first reading to a by-law providing among other things that no conductor of any car shall demand or collect a fare from any passenger unless such passenger is provided with a seat in the car. Further, strap holding or standing in aisles or onfoot boards is to be prohibited, and when a car is full a notice to that effect shall be placed in a conspicuous place and passengers not allowed to enter.

A bill to amend the Railway Act was laid before the House of Commons during the recent session seeking to make railway companies liable for damages to shippers when the delivery of goods is unduly detained through the fault of the railway companies.

The Mayor of Port Arthur, Ont., interviewed D. D. Mann, of Mackenzie, Mann & Co., Limited, recently, respecting the report that they intended to erect a large steel plant at Hamilton, Ont. He reports that he was informed by Mr. Mann that if the furnace now being erected at Port Arthur proved a success, steel works would be established in connection with it.

MARINE DEPARTMENT

Coast, Lake and River Officers for 1907.

The following appointments have been made by the principal navigation companies engaged in the coasting, lake and river routes for their various steam and sailing vessels, tugs and barges for the current year. In the first column is given the name of the vessel, in the second that of the captain, and in the third that of the chief engineer:

ALGOMA CENTRAL STEAMSHIP CO., SAULT STE. MARIE, ONT.

Agawa	C. W. Jordan	J. L. Smith
John J. Barlum (barge)	C. Stale	
King Edward	W. Bemrose	G. Sylvester
Leafield	G. W. Pearson	J. Cameron
Paliki	F. J. Davis	Jas. Gregg

CANADA ATLANTIC TRANSIT CO., MONTREAL.

Arthur Orr	J. Simonds	J. Murnan
Geo. N. Orr	H. Jaenke	T. Kelley
Kearsarge	W. Baxter	H. H. Evans
Ottawa	A. Birnie	W. Pauss

THE CALVIN CO., LTD., GARDEN ISLAND, ONT.

Burma (barge)	J. Ferguson	
Ceylon "	J. Ache	
Chieftain	C. E. Phelix	T. Gray
D. D. Calvin	H. N. Smith	G. Hazlett
Frontenac	J. Harris	M. Dorey
India	C. Coons	T. C. Smith
Johnston	O. Leblanc	T. Campeau
Parthia	D. Lefave	G. Sauve
Simla	A. H. Malone	R. H. Veech

CANADIAN LAKE AND OCEAN NAVIGATION CO., TORONTO

A. E. Ames	E. L. Stephen	S. Gillespie
H. M. Pellatt	W. H. Anderson	W. Byers
J. H. Plummer	J. Black	R. Chalmers
Scottish Hero	A. McIntyre	W. H. Durham
Turret Cape	R. D. Simpson	R. R. Foote
Turret Chief	M. McPhee	A. E. Kennedy
Turret Court	P. McIntyre	C. J. McSorley

CENTRAL CANADA COAL CO., LTD., BROCKVILLE, ONT.

Samuel Marshall	H. Bussell	H. Cerow

COASTAL STEAM PACKET CO., BRIDGEWATER N.S.

Bridgewater	J. Crouse	F. C. Simmes

C.P.R. DETROIT RIVER CAR FERRIES

Michigan	C. H. Jinkings	F. Merrill
Ontario	J. Corney	A. McDonald

C. P. CAR AND PASSENGER TRANSFER CO., PRESCOTT, ONT.

City of Belleville	A. Black	G. Piche
Outing	W. E. Chambers	C. Bailay
Henry Plumb	T. O'Neill	A. P. Graves
International	Wm. Henry	T. Murphy
Wm. Armstrong	H. M. Russell	H. Carter

C.P.R. UPPER LAKE SERVICE.

Alberta	L. Pyette	A. Cameron
Athabasca	A. Brown	W. Lockerbie
Manitoba	E. B. Anderson	W. Lewis

DESERONTO NAVIGATION CO., DESERONTO, ONT.

Ella Ross	D. B. Christie	M. J. McFaul
Ranger	A. Barnhart	A. Joyce
Reliance	J. Gowan	J. Toppings
Rescue	T. J. Lynch	O. Flood
Wherenow	W. J. Daly	T. Timlin

DETROIT, WINDSOR AND BELLE ISLE FERRY CO., DETROIT, MICH.

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Columbia	J. Wilkinson	H. Free
Excelsior	W. Firby	S. J. Merrill
Garland	M. McCum	J. Foster
Pappoose	J. H. Halero	W. Hyde
Pleasure	J. Densteaat	T. Merriman
Promise	D. Jacques	A. Garland
Sappho	A. Bain	W. Wilkie
Victoria	P. Williams	W. Merrill

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Prince Albert	D. W. Holmes	J. MacInnes
Prince Arthur	E. J. Kinney	D. Campbell
Prince George	A. W. Mackinnon	J. Ross
Prince Rupert	A. G. Potter	J. Pendrigh
Yarmouth	G. H. Haines	D. Ferguson

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Manitou	A. A. Batten	J. Cosford
Telegram	A. McKenzie	T. McElroy

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Huron	H. Oldenburg	J. Ladds
Lansdown	F. D. Forrest	J. F. Taylor

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H. G. Dalton	J. B. Rinn	G. L. Barnhart
John Crerar	H. J. Hutchins	J. C. Bustead
John Lambert	D. T. Sullivan	J. A. McCaffery
J. S. Keefe	D. Barry	G. Winters
John Sharples	F. L. Meno	W. H. Furey
Robert Wallace	R. Gleason	G. E. Willard
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Strathcona	J. Irving	W. King

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North King	J. Jarrell	G. Boyd

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MAGDALEN ISLAND STEAMSHIP CO., HALIFAX, N.S.

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Spry	J. Pierron	J. Fitzpatrick
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C.B.Powell "	J. Ellis
E.H.Bronson(barge)	J. C. Merchant
G. B. Greene "	J. Chartier
G.B.Pattee II "	A. D. Smith
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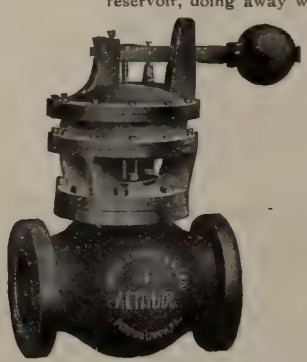

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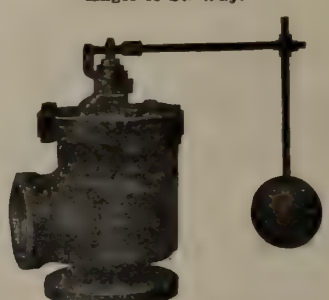

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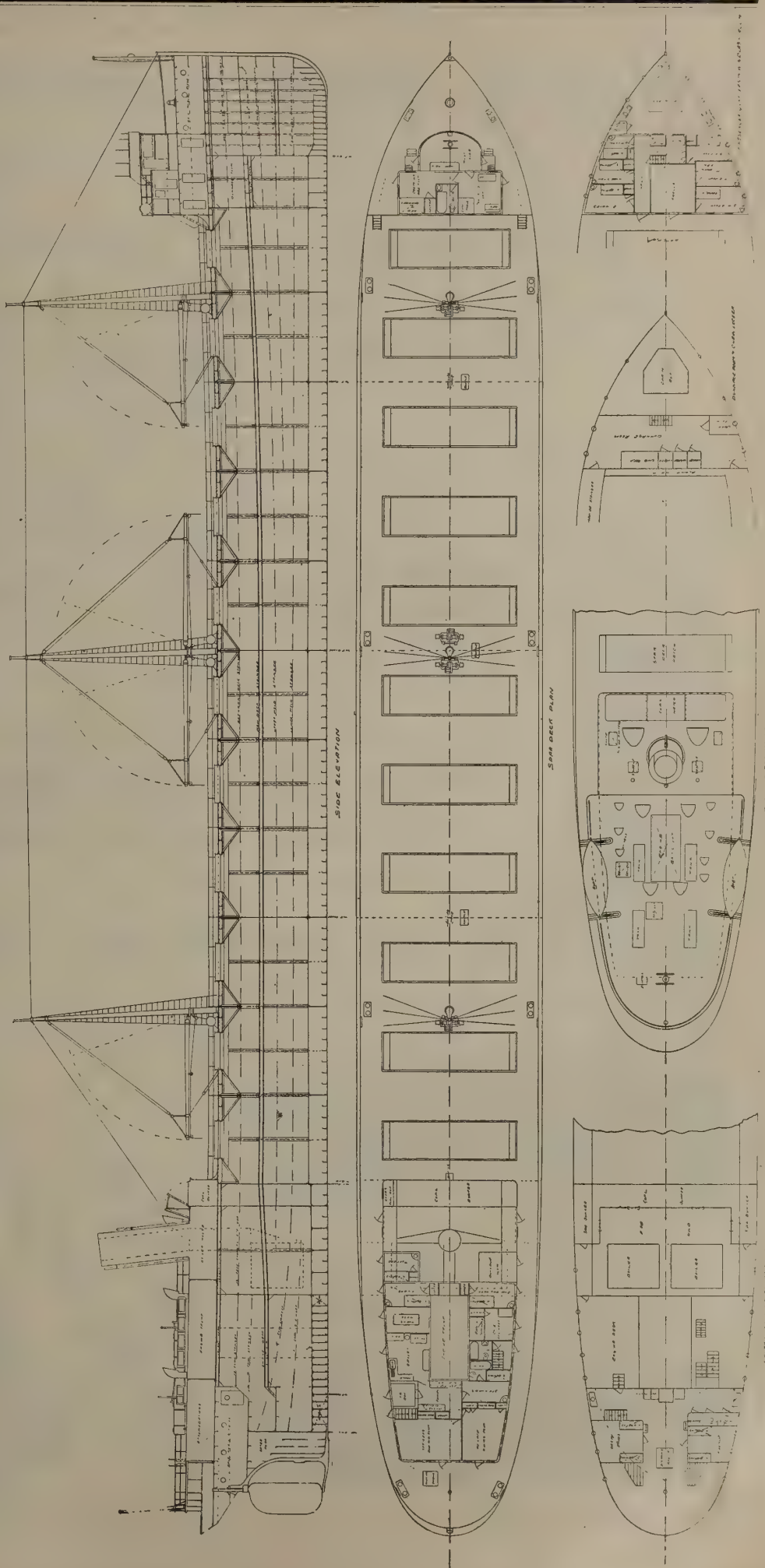
The Farrar Transportation Co.

This company is having built a steel single deck bulk freight steamer which it is proposed to name the Collingwood. She is to be built on the arch and webb frame system, without hold beams or stanchions. The spar deck is continuous all fore and aft, with raised top-gallant forecastle, with pilot house and texas on same, and deck-house aft, containing coal bunkers, boiler house, galley, two dining-rooms and crew's quarters. Those members of the crew who cannot be accommodated in the after deck house will be provided for in the forecastle, in the upper boiler house and on the fantail aft. There will be 11 cargo hatches 10 ft. long, fore and aft, spaced 24 ft. centres, between the fore and after deck houses. The hatch coverings will be of 3½ in. white pine. Three steel masts will be provided, each fitted with booms and rigging for handling cargo. Accommodation, consisting of a parlor and three staterooms, will be provided under the forecastle for passengers, and a dining-room will be provided aft. The hull will be fitted with a double bottom, 5 ft. deep, for water ballast, extending from collision bulkhead to after peak bulkhead, divided into nine watertight compartments with manifold and pumping system located in engine room. The steamer will be fitted with a triple expansion engine, cylinders 21, 33½ and 57 in. diameter by 42 in. stroke, to which steam will be supplied at 180 lbs. pressure by two Scotch boilers 14 ft. diameter by 12 ft long over heads. Each boiler will have three furnaces, and will be fitted with patent bridge walls and flue blowers. The vessel is being built in every respect to the highest requirements of the Great Lakes Register.



THE FARRAR TRANSPORTATION CO.'S STEAMSHIP COLLINGWOOD—PROFILE AND DECK PLAN.

G. Gibbons, K.C., chairman Canadian Section of the International Waterways Commission, delivered an address on International Waterways before the London Ont., Board of Trade, April 5.

Design of a railway bridge pier is the title of a 50 cent pamphlet by C. Derleth, Jr., C.E., Associate Professor Structural Engineering at the University of California, which is published by the Engineering News Publishing Co., New York.

The act respecting cold storage on steamships from Canada to the United Kingdom and in certain cities in Canada, passed in 1897, has been repealed by sec. 10 of an act to encourage the establishment of cold storage warehouses for the preservation of perishable food products, passed at the recent session of the Dominion Parliament.

Reference is being made to the fact that Canada was not invited to send a representative to the Imperial Navigation Conference now sitting in London, Eng. A British paper says that the Dominion has a remedy in her own hands by making navigation laws for her own coasts and inland waters, leaving the Board of Trade no alternative but to sanction the enforcement of her regulations upon British ships engaged in the coasting trade of the Dominion. The reason why Canada was not invited to be represented at the conference is that she has practically no interest in the questions to be discussed there. It is true that Canada is, as one paper puts it, "the first maritime nation in the Empire next to the United Kingdom," but almost without exception Canadian vessels are engaged in trading in territorial waters, or coastwise on the American continent. All vesssels engaged in the "over sea" trade from Canadian ports are either British owned, or where they are Canadian owned, they are British registered. Under these circumstances it is difficult to see where Canada's interest in the conference comes in.

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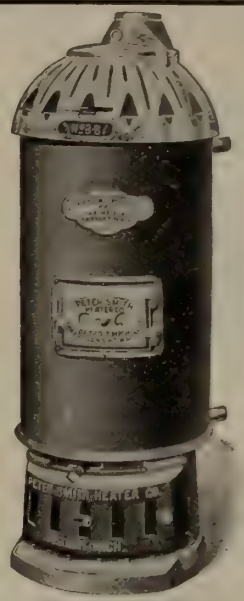

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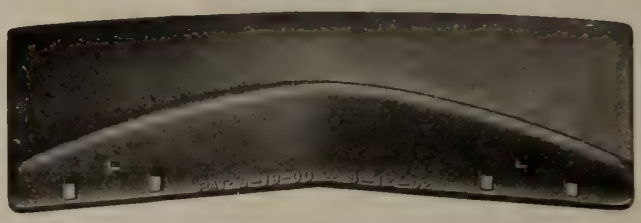

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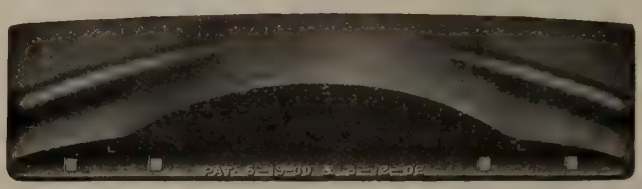

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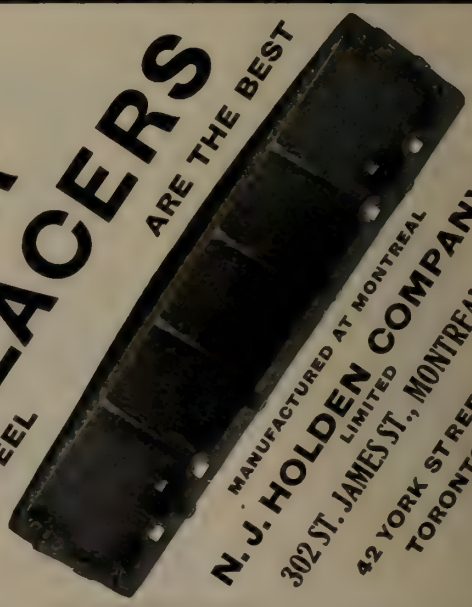

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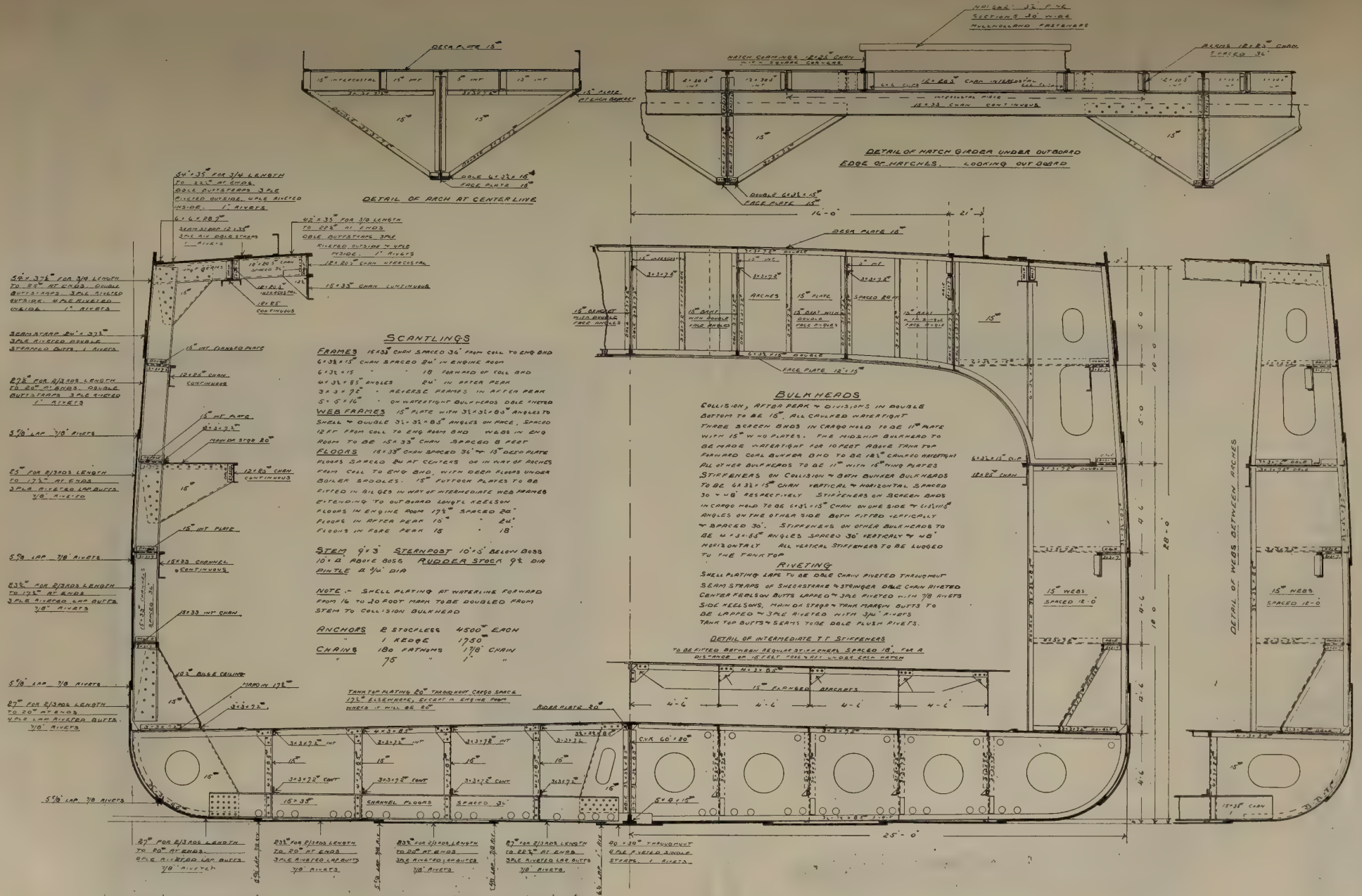
DETAIL OF ARCH AT CENTER LINE
DETAIL OF HATCH GIRDER UNDER OUTBOARD EDGE OF HATCHES, LOOKING OUTBOARD
SCANTLINGS
FRAMES 16 x 33 CHAN SPACED 36" FROM COLL TO ENG BHD
6 x 3½ x 15 " " 18 FORWARD OF COLL BHD
4 x 3½ x 85 ANGLES 24" IN AFTER PEAK
3 x 3 x 7/8 " REVERSE FRAMES IN AFTER PEAK
5/16 " ON WATERTIGHT BULKHEADS DOUBLE RIVETED
WEB FRAMES 15" PLATE WITH 3½ x 3½ x 85 ANGLES TO SHELL & DOUBLE 3½ x 3½ x 85 ANGLES ON FACE, SPACED 12 FT FROM COLL TO ENG ROOM BHD. WEBS IN ENG ROOM TO BE 15 x 33 CHAN SPACED 8 FEET
FLOORS 16 x 38 CHAN SPACED 36" & 15" DEEP PLATE FLOORS SPACED 84 AT CENTERS OR IN WAY OF ARCHES FROM COLL TO ENG BHD. WITH DEEP FLOORS UNDER BOILER SADDLES. 15" FUTTOCK PLATES TO BE FITTED IN BILGES IN WAY OF INTERMEDIATE WEB FRAMES EXTENDING TO OUTBOARD LONGTL KEELSON
FLOORS IN ENGINE ROOM 17½" SPACED 24"
FLOORS IN AFTER PEAK 16 " 24"
FLOORS IN FORE PEAK 15 " 18"
STEM 9" x 3" STERNPOST 10" x 5" BELOW BOSS 10" Ø ABOVE BOSS RUDDER STOCK 9½ DIA PINTLE Ø 3¼" DIA
NOTE:- SHELL PLATING AT WATERLINE FORWARD FROM 16 TO 20 FOOT MARK TO BE DOUBLED FROM STEM TO COLLISION BULKHEAD
ANCHORS 2 STOCKLESS 4500# EACH
" 1 KEDGE 1750#
CHAINS 180 FATHOMS 1⅞" CHAIN
" 75 " 1" "
BULKHEADS
COLLISION, AFTER PEAK & DIVISIONS IN DOUBLE BOTTOM TO BE 16" ALL CALKED WATERTIGHT
THREE SCREEN BHDS IN CARGO HOLD TO BE 11" PLATE WITH 15" W NG PLATES. THE MIDSHIP BULKHEAD TO BE MADE WATERTIGHT FOR 10 FEET ABOVE TANK TOP
FORWARD COAL BUNKER BHD TO BE 18" CALKED WATERTIGHT
ALL OTHER BULKHEADS TO BE 11" WITH 16" TWING PLATES
STIFFENERS ON COLLISION & BOTH BUNKER BULKHEADS TO BE 6 x 3½ x 15" CHAN VERTICAL & HORIZONTAL SPACED 30" & 48" RESPECTIVELY. STIFFENERS ON SCREEN BHDS IN CARGO HOLD TO BE 6 x 3½ x 15" CHAN ON ONE SIDE & 6 x 3½ x 15" ANGLES ON THE OTHER SIDE. BOTH FITTED VERTICALLY & SPACED 30". STIFFENERS ON OTHER BULKHEADS TO BE 4 x 3½ x 85 ANGLES SPACED 30" VERTICALLY & 48" HORIZONTALLY. ALL VERTICAL STIFFENERS TO BE LUGGED TO THE TANK TOP
RIVETING
SHELL PLATING LAPS TO BE DBLE CHAIN RIVETED THROUGHOUT
SEAM STRAPS OF SHEERSTRAKE & STRINGER DBLE CHAIN RIVETED
CENTER KEELSON BUTTS LAPPED & 3RLE RIVETED WITH 7/8 RIVETS
SIDE KEELSONS, MAIN OR STRAP & TANK MARGIN BUTTS TO BE LAPPED & 3RLE RIVETED WITH 3/4" RIVETS
TANK TOP BUTTS & SEAMS TO BE DBLE PLUSH RIVETS.
DETAIL OF INTERMEDIATE T T STIFFENERS
TO BE FITTED BETWEEN REGULAR STIFFENERS, SPACED 18", FOR A DISTANCE OF 16 FEET FORE & AFT UNDER EACH HATCH
DETAIL OF WEBS BETWEEN ARCHES
TANK TOP PLATING 80" THROUGHOUT CARGO SPACE 12½" ELSEWHERE, EXCEPT IN ENGINE ROOM WHERE IT WILL BE 80"
DECK PLATE 15"
RIDER PLATE 30"
CHANNEL FLOORS SPACED 36"
15" FLANGED BRACKETS
15" WEBS SPACED 12'-0"
16'-0"
21'
25'-0"
28'-0"

THE FARRAR TRANSPORTATION CO.'S STEAMSHIP COLLINGWOOD—MIDSHIP SECTION.

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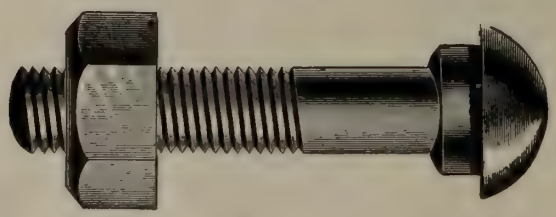

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Coal	B.T.U. per lb. combustible	Ash per cent.	Moisture per cent.
Anthracite	14,700	10 to 20	1 to 5
Semi-anthracite	14,900	10 to 20	1 to 5
Semi-bituminous	15,800	5 to 10	1 to 6
Bituminous—Eastern	15,000	5 to 20	2 to 6
" Western	14,200	8 to 25	6 to 15
Lignitæ	12,200	5 to 20	10 to 30

Coal—Consumption—Varies greatly with different conditions of trains, roads, locomotives, etc. Exact comparisons are impossible unless we know all conditions, which is seldom the case. Tests on several roads running into New York in 1897 give these results: Hard Coal: Average per train mile, 17.3 freight cars, 122 lbs.; average per train mile, 7 passenger cars, 112 lbs.; average per freight car mile, 7.05 lbs.; average per passenger car mile, 16 lbs. Soft Coal—Average per train mile, 18.15 freight cars, 120 lbs.; average per train mile, 7 passenger cars, 110 lbs.; average per freight car mile, 6.06 lbs.; average per passenger car mile, 15.07 lbs.

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Atlantic and Pacific Ocean Marine.

Dr. J. E. March, Quarantine officer at St. John, N.B., died there suddenly, April 3.

What is to be done with the S.S. Bavarian? She has been lying on the beach at St. Joseph de Levis, Que., all winter, and there is not a dock on the St. Lawrence large enough to allow her to enter

The Donaldson Line, according to a Glasgow, Scotland cable, has placed an order for another steamer, similar to the Cassandra, for its Glasgow-Canada trade. An illustration and description of the Cassandra appeared in our Oct., 1906 issue.

The Elder-Dempster str. Bornu arrived in Halifax, N.S., Mar. 25, and has taken up the run of the Dahomey, in the Halifax-Mexico service. The Bornu is 345 ft. long, 42 ft. beam, 2,000 tons register, and has accommodation for first and second-class passengers.

Following are officers and directors of the Quebec Steamship Co. for the current year: President, W. Price; Vice-President, J. T. Ross; other directors: G. T. Davie, A. F. Hunt, W. Simons, Hon. J. Sharples, J. C. Thomson, Quebec; E. H. Botterell, M. N. de Lisle, Montreal.

The C.P.R. has completed arrangements with the Mersey Dock and Harbor Board, by which it will be enabled to concentrate the whole of its trans-Atlantic business at the Sandon dock. The company will build a large cold storage warehouse and other buildings at the dock.

The Imperial House of Commons, Mar. 27, ratified the contract with the C.P.R. for the conveyance of mails between Liverpool and Hong Kong. The company receives $17,305 for each trip. The contract was entered into during the summer of 1906 and runs for two years.

Jas. Thom, Montreal Manager of the Dominion Steamship Line, returned to that city April 2, after a lengthened trip to Europe. He says it is likely that the company will place an order for another large steamship for the Canadian trade, similar to the Alberta, which was recently ordered.

The Allan Steamship Line has ordered another 10,000 tons, twin screw steamship, for the Glasgow-Montreal service. She will be 485 ft. long, 60 ft. wide and 41 ft. deep Speed 15 knots. The company has already under construction a vessel of similar size for the same route, which is expected to be ready in Sept.

R. Reford, Montreal, who was chairman of the Transportation Commission, which reported to the Canadian Government Dec., 1905, prepared an address on the subject of transportation which was read before the Mining Society of Nova Scotia recently. It dealt exhaustively with the establishment of an ocean express steamship service between Halifax and Ireland.

A deputation waited on the Minister of Trade and Commerce, April 4, and urged that assistance be given towards establishing trade communication between Canada and Australia, by means of a line of steamers from a port in eastern Canada. It was understood that the matter would be discussed between the Premier and the Australian Premiers at the Colonial Conference in London.

The Union Steamship Co. is rearranging its contracts for carrying the mails between Australia, New Zealand and Vancouver, B.C. From July 1 the steamships will leave Sydney, N.S.W., for Wellington, N.Z., and thence will call at Fiji, on the way to Vancouver, instead of sailing from Sydney to Brisbane, and on to Vancouver, calling at Suva. The Queensland mails will be brought overland by train to Sydney.

Furness, Withy & Co., and the Manchester Liners are suing the Great Northern Ry. of Canada, for damages for a breach of agreement to supply cargoes of grain to their steamers. The contract was entered into in 1903, and in May of that year the steamers Austriana and Manchester Engineer, after waiting for several days at Quebec, could not get cargoes from the railway company. Among the reasons put forward by the G.N. Ry. for inability to provide the cargoes was the burning of a bridge which tied up traffic on the line for some days.

Notwithstanding the persistent denials of the President of the C.P.R., and the manager of the company's steamships, the reports continue to crop up that the company has ordered new Empress steamers for its Atlantic or Pacific Ocean lines. One of the latest reports comes from Vancouver, B.C., where D. E. Brown, the superintendent of the C.P.R. Trans-Pacific steamers, is credited with saying that construction on the two new Empress steamers for the Pacific service will be commenced immediately, and that they will be afloat within 18 months.

The question of the adoption of Father Point, Que., as the landing place for mails, instead of Rimouski, has been again discussed by the Pilots Association, and is being taken up by the Shipping Federation of Canada and the Chambre de Commerce at Montreal. It is claimed that with the deeper water at Father Point, the mails could be handled much more expeditiously than is the case at Rimouski. All that is necessary to make Father Point available is the construction of two miles of railway to connect the landing place with the Intercolonial Ry.

The first steamers to sail from Great Britain to Quebec during the current season of navigation were the Allan Line S.S. Sardinian from London, April 13; Allan Line S.S. Ionian from Liverpool, April 18; Dominion Line S.S. Ottawa, April 18; Allan Line S.S. Corinthian, from Glasgow, April 20; Donaldson Line S.S. Athenia, from Glasgow, April 20; C.P.R. S.S. Lake Manitoba, from Liverpool, April 24; Allan Line S.S. Virginian, April 26. The earliest sailings from Montreal will be the Allan Line S.S. Ionian, the Dominion Line S.S. Ottawa, and the Allan Line S.S. Sardinian, on May 4.

Maritime Provinces and Newfoundland.

Capt. E. Davison, who died at Hantsport, N.S., April 11, aged 95, was one of the first mariners sailing out of Hantsport.

A proposition is under consideration for establishing a steamship line between Windsor, N.S., Cobequid Bay and Minas Basin ports.

The schooner Patriot has been sold by Capt. Hardy to Capt. Cook, of Isaac's Harbor, N.S., and has been transferred to the coal trade.

A steamer named the Enterprise has been purchased in New York, and will be run as a ferry between Portugal Cove and Bell Island, Nfld.

John McMillan, formerly chief engineer of the str. Stanley, from which he retired in 1902, died in Charlottetown, P.E.I., recently, aged 80.

Capt. Courtney, Grand Bank, Nfld., has purchased the schooner Sea Fox, 111 tons, built at Essex, Mass., 1889, and will transfer her to the British flag.

The new shipping pier at Glace Bay, N.S., for the Dominion Coal Co., has been completed, and will be utilized for shipping coal during the coming season of navigation

A large area of land at Kelley's Beach, Sydney, N.S., has been bonded for three months, it is reported, to those interested in the laying out of a steel shipbuilding yard.

The sealing str. Greenland became disabled on the sealing grounds, and is reported sunk. All the crew, 183 in number, were rescued by the strs. Newfoundland and Grik after they had abandoned the Green land.

A company has been formed at Albert, N.B., for the purpose of engaging in the towing trade on Shepody Bay and river, and a tug has been purchased in Maine. Capt. J. Lunn will have command of the tug.

The Red Cross Line str. Rosalind arrived in New York April 5 from Newcastle-on-Tyne, Eng., where she had been under repair, and left April 10 on her regular run to St. John's, Nfld., and Maritime Province ports.

The str. John Irwin, which the Port Hood Richmond Ry. Coal Co. recently purchased in England, sailed from Liverpool for Halifax, N.S., April 10. She is a steel steamer, built at Paisley, Scotland, 1897, her capacity being 303 tons gross.

Two large steel scows for the Dominion Government dredging plant will be launched at New Glasgow, N.S., in the near future. A steel schooner, 140 ft. long, and to have a capacity of about 500 tons, is also to be built at New Glasgow.

The sealing str. Southern Cross, with a crew of 172 men, which left St. John's, Nfld., Mar. 11, had not been heard of April 9, and it was feared she had met with an accident. All the other vessels of the sealing fleet have been accounted for.

The port of St. Marys, N.S., has been declared by proclamation to be a port to which the provisions of part 12 of the Canada Shipping Act, chap. 113, revised statutes of 1906, shall apply, and T. Mills has been appointed harbormaster.

During his visit to Great Britain the Minister of Marine proposes to make an investigation into icebreaking steamers with a view of deciding as to the construction of one for service between Prince Edward Island and the mainland.

The str. Amherst, owned by the Magdalen Islands Development Co., is being given an extensive overhaul at North Sydney, N.S. A new boiler has been put in, and the whole of the interior has been re-arranged. It is expected that the repairs will be completed early in May.

The following appointments have been made by the Dominion Government: J. T. Bourque, wharfinger at Port Cocagne, N.B. F. McInnes, wharfinger at Port Hawkesbury, N.S.: L. Belliveau, wharfinger at Church Point, N.S.; J. E. Gaskell, harbormaster for Northern Grand Manan, N.B.

The Port Hood Richmond Ry. Coal Co. has chartered the str. Garibaldi, and has purchased two steamers in Great Britain, the John Irwin and the Donegal Castle, for its coal trade on the St. Lawrence. It is expected to charter another steamer of about 2,000 tons capacity during May, for the same route.

In the House of Commons April 8, T. Crockett, M.P., urged the necessity of the provision of a continuous channel between Fredericton and Woodstock, N.B. There were, he said, seven or eight points between

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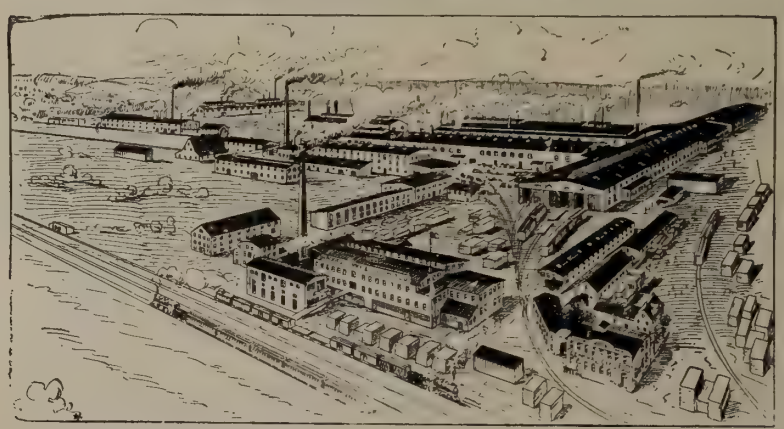

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these towns where there were gravel cars that were obstructions to navigation. These could be removed at a comparatively small cost

The Dominion Government has awarded gold medals to Capt. J. Champion and Capt. D. Fraser, and silver watches to J. Cahill, W. Leavitt, G. McBeath, C. McNeill, F. Skerry, C. Perry, J. McCabe and W. Smith, for bravery in connection with the rescue of three of the crew of the schooner A. J. McKeen, wrecked at Alberton, P.E.I., Nov. 16, 1906.

The Dominion Iron and Steel Co. will have in its fleet during the coming season in its trade between Sydney, N.S., and Wabana, Nfld, Felix, for the limestone trade exclusively; the Hircindo on time charter for either the ore or limestone trade as required; and two new cantilever steamers, Ellen and Siggu, now being completed at Middlesbrough-on-Tees, England.

The Robie M. is the name of the steamer built to replace the Florence C., lost in June, 1906. The hull of the new steamer was built at Liverpool, and the engines installed at Halifax, N.S. She has a capacity for 66 tons of cargo, is fitted for towing and fishing, but has no passenger accommodation. She will trade between Halifax and Isaac's Harbor, calling at a number of intermediate points.

There is under construction at Mahone Bay, N.S., the hull of a new steamer to replace the Strathcona, which was burned in Dec., 1906. The new steamer will have a length of 150 ft., about 15 ft. longer than the Strathcona. She will have a speed of about 11 knots an hour, and a capacity of 300 tons. The passenger cabins will be forward, accommodation being provided for about 50 persons. It is expected that the hull will be launched in June. The boiler and engines are being constructed at Halifax, where they will be installed.

The fleet of steamers to be employed by the Dominion Coal Co. during the coming season of navigation between Sydney, N.S., and St. Lawrence River ports, includes the following chartered steamers: Bergenhus, 2,344 tons; Borgestad, 2,537 tons; Catalone, 2,416 tons; Chr. Knudsen, 2,489 tons; Dominion, 2,584 tons; Forensbo, 2,499 tons; Frutzoe, 2,537 tons; Hekbor, 2,516 tons; Kron Prinz Plaf, 2,511 tons; Mystic, 2,432 tons; O. A. Knudsen, 2,270 tons; Ran, 1,946 tons; Symra, 1,960 tons; Tanke, 361 tons; Tricolor, 2,597 tons. The company's own steamers, Bona Vista, Cacouna, Cape Breton, and Louisburg, will also be engaged in the trade.

Province of Quebec Marine.

T. Bourdages has been appointed Government wharfinger at St. Charles de Caplan, Que.

The Dominion Parliament has authorized the loan of a further sum of $800,000 for harbor development. The interest on the loan is to be met out of the revenues of the port.

The Quebec Board of Trade has passed a resolution asking the Dominion Government to construct a graving dock at that port capable of admitting the largest steamers afloat.

During the 1906 season of navigation there were accommodated in Louise docks, the breakwater and Pointe-a-Carcey wharves, Quebec, 460 vessels. This is exclusive of the ocean-going vessels which were berthed at the breakwater extension.

The name of the schooner Tyree, official number 97,096, registered at Quebec, has been changed by order-in-council to that of G.T.D., and that of the Anglesea, official number 59,954, registered at Quebec, has been changed to that of Bird.

J. Vaughan, heretofore Superintendent district 3, Eastern Division, C.P.R., has been appointed Superintendent of Terminals by the Montreal Harbor Commission. This is a new office, and the superintendent will have charge of the whole system of railway tracks along the harbor front.

The action for damages arising out of the collision in Montreal harbor early in the 1906 season of navigation, between the steamer Gaspesian and a floating elevator belonging to the Montreal Elevating Co., has been advanced another stage in the Quebec Admiralty court, evidence in rebuttal having been taken Mar. 26.

The St. Lawrence and Quebec Railway Ferry Co. is the amended title of the company which applied to the Dominion Parliament for a charter of incorporation as the St. Lawrence Railway Ferry Co. It is given power to operate a railway car ferry across the St. Lawrence River from any point within the limits of the parish of Montreal to any point in the parish of Chambly.

The Dominion ice-breaking str. Montcalm was engaged for several days in breaking up the ice bridge at Cap Rouge. It was intended to cut a channel 700 ft. wide from the bridge as far as Pointe-a-Basile, in order to allow the ice on the river between Montreal and that point to pass down the river without jamming. In 1906 the first vessel reached Montreal April 29, but it was not expected that navigation will be opened so early this season. The str. King Edward started out from Quebec April 6 for Seven Islands, but returned the same day, having encountered a solid field of ice. Two schooners managed to escape the icefield, and arrived in Quebec April 6.

The Richelieu and Ontario Navigation Co. will operate its fleet on the following routes during the current season of navigation: Toronto, Kingston, Rapids King and Brockville, on the Toronto-Montreal line; Hamilton, Belleville and Picton on the Hamilton-Montreal line; Montreal and Quebec on the Montreal-Quebec line; St. Irenee, Murray Bay and Tadousac, on the Saguenay line; Longueuil, Laprairie and Boucherville, on the ferry line; Beaupre and Three Rivers, as pilgrimage steamers; Berthier and Chambly, on the Berthier-Chambly line. The Cornwall and Prescott will be run on excursions and the Chicoutimi will be held as a spare boat on the eastern division.

The House of Commons has passed a resolution authorizing the advance, from time to time, by the Government to the Montreal Harbor Commissioners, in addition to the amounts now specified by the statutes, of sums not exceeding in the aggregate $3,000,000 in order to enable the commissioners to complete the terminal facilities now under construction, and such further facilities as are necessary to properly equip the port. The resolution sets forth that all plans for the proposed works must first be approved by the Government, and that the Board shall deposit with the Government debentures equal in par value to the advances of money made. The debentures are to bear interest at the rate of 3%, and to be repayable within 25 years of the date of issue, the principal and interest being repaid out of revenue as provided by statute. The loan now made will allow of the completion of the new wharf sheds, the taking over of the railway service on the water front, the construction of a new pier for the Dominion Coal Co., and for the transfer of the smaller boats now using the Victoria pier to another point in the central part of the harbor.

Ontario and the Great Lakes.

A 30 h.p. tug is being built at Peterboro, Ont., for use on the Trent Valley canal.

The Trent Valley Navigation Co.'s tug Ajax has been sold to J. E. Fitzgerald, Peterboro, Ont.

The passenger str. Winona, operated in 1906 from Midland, Ont., has been sold by Capt. W. White.

One hundred feet has been added to the length and 20 ft. to the width of the wharf at Muskoka Wharf, Ont.

D. Giles, at one time well known in the steamboat business in Toronto, died there April 5. He retired about 15 years ago.

Capt. S. B. Richmond, for many years keeper of the lighthouse at Thunder Cape, Lake Superior, died at Port Arthur, Ont., Mar. 26.

Capt. C. W. Stone, formerly in the G.T.R. car ferry service between Windsor, Ont., and Detroit, Mich., died in the latter city, Mar. 29, aged 73.

The steel tug under construction at Collingwood, Ont., for the Department of Public Works, was launched April 11, and was named Alberta.

Capt. R. Cootes, who died in Toronto, April 5, aged 74, was at different times master of the schooners Speedwell, Van Straubenzie and North Star.

John Tinning, of Tinning's Wharf, Toronto, died there April 9. Mrs. Tinning, who was ill of pneumonia at the time of her husband's death, died April 13, aged 66.

The str. Winona, recently sold by the underwriters, will be taken from Collingwood, Ont., where she has been wintering, to Detroit, Mich., where she will be repaired.

R. O. and A. B. Mackay, Hamilton, Ont., are in treaty for the building of three package freight steamers. They recently concluded arrangements for the building of a 550 ft. bulk freighter on Lake Erie.

Capt. W. Hall, for 12 years past Deputy Harbormaster of Toronto, died there April 12, aged 78. At one time he owned a number of vessels including the Marquis, W. T. Robb, Bentley, and W. R. Hall.

The Minister of Marine has directed the holding of a further and more searching investigation into the circumstances attending the loss of the Hamilton str. Golspie near Michipicoten, Ont., in Dec., 1906.

The Minister of Marine promised in the House of Commons, April 4, that full consideration would be given to the suggestion that the life-saving appliances at Toronto be made adequate to the requirements of the port.

A British despatch, dated April 5, states that a steamer named Glencourt was launched at Dumbarton, Scotland, that day for the Canadian lakes trade. This is one of the two vessels ordered by the Montreal Transportation Co.

The name of the str. Tadousac, official number 116,263, registered at Toronto, and which was recently bought by the Northern Navigation Co., of Ontario, from Waldie and Wright, has been changed by order-in-council to that of Doric.

Reports from the U.S. revenue cutter officers on the Great Lakes state that the system of marking the International boundary line by means of buoys, which was in force in 1906, resulted satisfactorily, and will be tried again this season.

The Great Lakes Dredging Co. has succeeded in recovering 3,700 rails, 7,100 angle bars, and 2,300 spikes, from the bottom of the Kaministikwia River, Fort William, Ont., where they were deposited in Dec., 1906, owing to the collapse of a wharf.

The Hamilton, Ont., steamers Neepawah and Strathcona have been docked at Detroit,

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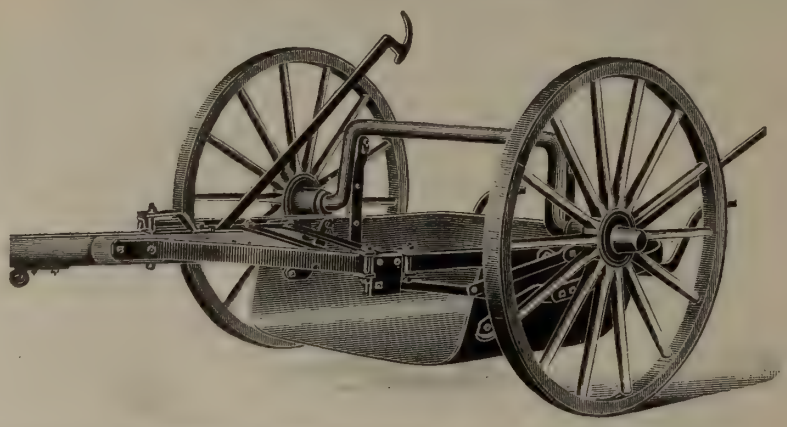

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THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Mich., for repairs. The first-named requires 25 plates on the sides and bottom of the hull to be renewed; the extent of the repairs to the Strathcona are not so extensive.

Surveys are being made at Barnhart's Island, at the foot of the Long Sault Rapids of the St. Lawrence, near Cornwall, Ont., by a number of U.S. engineers. Local reports state that their object is for the construction of a dam and the development of water power.

The steamers Glenellah and Dundee, managed by R. O. and A. B. Mackay, Hamilton, Ont., will be run between Owen Sound and Fort William, Ont., during the current season, an arrangement having been made by which they will be at the C.P.R.'s disposal during the season, to handle its surplus freight.

The Canadian Passenger Car and Passenger Transfer Co. is having a steel car ferry built by the Polson Iron Works, Ltd., Toronto, for its trade between Prescott, Ont., and Ogdensburg, N.Y. The ferry is being built sufficiently strong to cross the river during the winter.

The steel framework and machinery for the new steamer, to be named the Iroquois, for the Huntsville, Lake of Bays and Lake Simcoe Navigation Co., has been delivered at Huntsville, Ont., and is being transferred to the Lake of Bays, where it is being erected.

The Dominion Government has authorized the carrying out of various works at Cobourg, Ont., in order to provide the necessary accommodation for the car ferry service about to be inaugurated by the G.T.R., and Buffalo, Rochester and Pittsburg Ry. The works include dredging and the extension of the present piers.

The Department of Public Works has under consideration tenders for dredging at the mouth of Rainy River, Ont., the work to be done during the current year. Owing to the shoaling of the river in recent years, the navigation at the mouth of the river has been considerably interfered with, and the str. Kenora had to be taken off the route in 1906.

ONTARIO NO. 1, OWNED BY ONTARIO CAR FERRY CO.

The str. Rosedale has been sold by the St. Lawrence and Chicago Steam Navigation Co to R. O. and A. B Mackay, Hamilton, Ont., the price paid, it is reported, being about $80,000. The Rosedale is a steel screw steamer, built at Sunderland, Eng., 1888, and equipped with engines of 106 n.h.p., her dimensions being: Length, 246.1 ft.; breadth, 35 ft.; depth, 21.1 ft.; tonnage—gross, 1,507; register, 977 tons.

The Niagara Iron and Steel Co., which has been incorporated under the Dominion Companies' Act with offices at Toronto and a capital of $1,000,000, is authorized to own and operate steamers, and to construct tramways in connection with its mines, smelting works and other plants. The provisional directors are: Hon. J. K. Kerr, J. A. Paterson, W. Davidson, W. F. McFarland, and A. M. McKenzie, Toronto.

The Lemcke Tug Co. has been incorporated under the Dominion Companies' Act, with a capital of $20,000 and offices at Lion's Head, Ont., to carry on a general navigation business; the business of towing, wrecking and salvage with various allied businesses, and particularly to acquire the tug W. E. Gladstone. The provisional directors are: C. Pedwell, C. Lemcke, J. Waugh, Mrs. M. J. Pedwell and Mrs. S. L. Lemcke, of Lion Head, Ont.

The Ontario Dock Co. proposes to erect a dock on the bay front at the foot of York St., Toronto. The site has a frontage of 190 ft., and it is proposed to run out a pier 65 ft. wide and dredge slips on either side. Mackenzie, Mann & Co. have the contract, and it is expected that the dock will be ready for the 1908 trade. The dock will be used by the Niagara, St. Catharines and Toronto Navigation Co., the Hamilton Steamboat Co., and the Canadian Lake and Ocean Navigation Co.'s steamboats.

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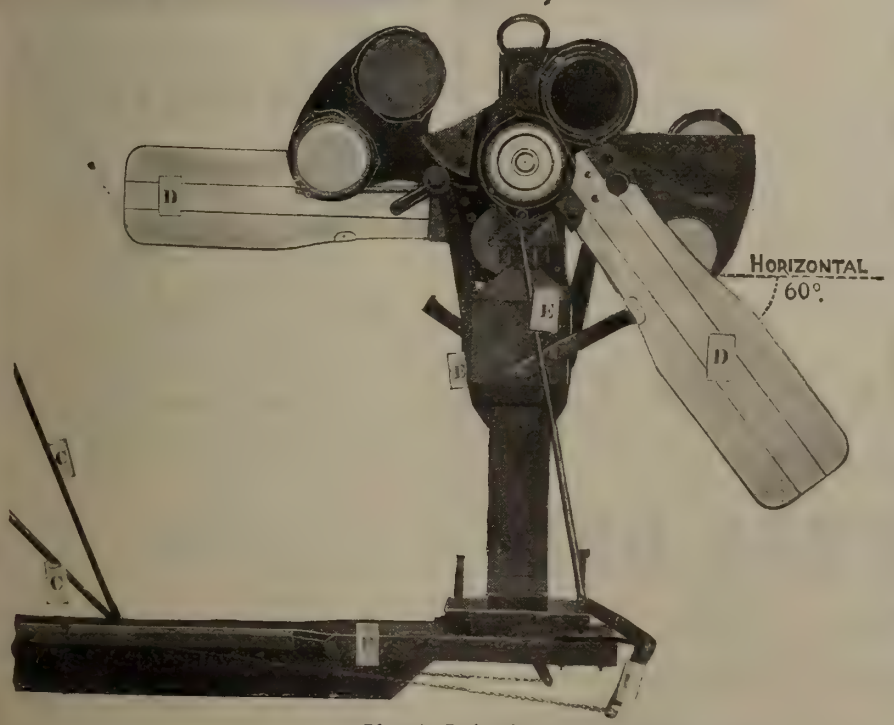

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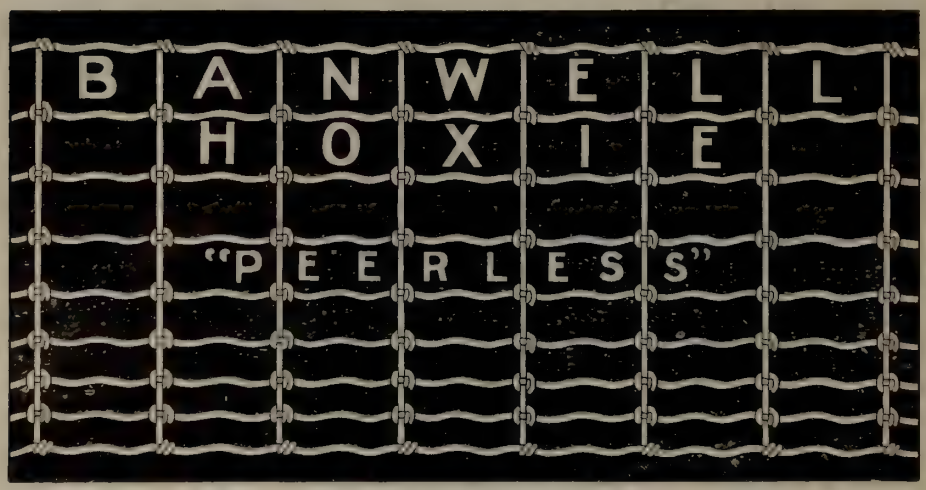

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Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
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"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106.10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

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Chicago, March, 1907, 2 events
Boston, March, 1907, 1 event

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"	Worcester	†9.04	"	*9.13 "
"	Boston	*8.15	"	*7.30 "

VIA G.T.RY., AND WHITE RIVER JCT.

Lv.	Montreal	*9.01	a.m.,	*8.40 p.m.
Arr.	Lowell	*6.11	p.m.,	*7.17 a.m.
"	Worcester	†9.04	"	*9.13 "
"	Boston	*6.55	"	*8.05 "

VIA G.T.RY., WEST SHORE & ROTTERDAM

Lv.	Toronto			*12.01 p.m.
"	Niagara Falls			*3.31 "
"	Buffalo	*4.30	a.m.,	*7.20 "
Arr.	North Adams	*1.08	p.m.	*5.11 a.m.
"	Worcester	*4.55	"	*9.59 "
"	Boston	*5.20	"	*9.50 "

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The Lakes Transportation Co. has been incorporated under the Ontario Companies' Act, with a capital of $100,000 and offices at Toronto, to carry on the business of carriers by water, and of water transportation, both on inland and tidal waters; to build, construct, equip and operate ships, vessels, boats and barges, and to hold the stock and securities of any other companies incorporated for any of the said purposes. The provisional directors are: G. A. Farini, A. C. Thompson, W. H. Williams, A. M. Dymond, W. A. Douglas, of Toronto.

Following are the dates of the opening of navigation on the Great Lakes: Str. Pierrepont, Kingston to Garden Island, Ont., Mar. 27; str. Macassa, Hamilton to Port Dalhousie, Ont., Mar. 28; str. Macassa, Hamilton to Toronto, and str. Lakeside, Port Dalhousie to Toronto, April 4; str. Neepawah, from Collingwood, Ont., for Detroit, Mich., April 8; str. Strathcona, from Port Colborne to Fort William, Ont., April 9; Northern Navigation Co.'s service from Sarnia to Fort William, April 20, and from Collingwood, April 23. The Welland canal was opened for navigation April 14.

Stadacona Limited, Donnacona Limited, Strathcona Limited, and the Hamilton and Fort William Navigation Co., Limited, are the titles of four companies incorporated under the Ontario Companies' Act, with W. Southam, A. E. Carpenter, J. Milne, C. E. Doolittle, G. L. Staunton, K.C.; A. B. Mackay, and G. Hope, of Hamilton, Ont., as provisional directors. The offices of the companies are at Hamilton, Ont.; the capital of the Stadacona, Donnacona and Strathcona companies being $40,000 each, and of the H. and F. W. N. Co. being $1,000,000. The object of each company is the same, viz.: to construct, acquire and navigate steam and other vessels for the conveyance of passengers, goods and merchandise, and to act as a common carrier of passengers and goods, and as a forwarder, wharfinger and warehouseman, and for the purposes of the company to deal in goods, wares and merchandise, with incidental and subsidiary powers.

The three steamships purchased in Great Britain for C. H. F. Plummer, and which will be operated under the name of the Canadian Lake Transportation Co., Ltd., as part of the Canadian Lake Line, were formerly engaged in the Leith, Hull and Hamburg Steam Packet Co.'s line (J. Currie & Co., Leith, Scotland). The Corunna and Nevada were built by Ramage and Ferguson, Leith, in 1891, and are steel screw steamers, 1,256 tons gross and 775 tons net, and are fitted with triple expansion engines, 17, 27 and 44 in. diameter, by 30 in. stroke. The third str., Morena, was built in 1890, by L. and H. Morton & Co., Leith, and is similarly engined. The Canadian Lake Transportation Co. has been incorporated under the Dominion Companies' Acts with offices at Toronto, and a capital of $100,000 to carry on a shipbuilding, engineering, navigation, transportation and terminals business in Canada or elsewhere. The provisional directors named are merely for organization purposes. It is understood that J. H. Plummer will be President and C. H. F. Plummer, Secretary-Treasurer and General Manager.

The Ontario Car Ferry Co.'s steel car ferry Ontario No. 1 was launched at Toronto, April 6, the christening being performed by Miss May Fitzhugh, daughter of the Third Vice-President G.T.R. The steamer is 320 ft. long, 56 ft. wide, and when loaded will have a draught of 15 ft. She has a capacity for 28 loaded cars, and is provided with 100 staterooms for passengers. She is of the closed-in type, the cars being taken on and off at the stern, and is of extra heavy construction, as it is intended to make a daily trip across the lake between Cobourg or Port Hope, Ont., and Charlotte, N.Y., winter and summer alike. Power will be supplied to the twin screws by engines of the triple expansion type, steam being generated by Scotch boilers. A speed of 15 miles an hour will be maintained. The steamer is expected to be ready for service early in June. The Ontario Car Ferry Co. is a combination of the G.T.R. and the Buffalo, Rochester and Pittsburg Ry., and it is intended to divert a portion of the coal traffic which now goes round by Suspension Bridge, thus saving a considerable mileage.

The Mutual Steamship Co. has been incorporated under the Dominion Companies' Act, with a capital of $99,000 and offices at Port Colborne, Ont., to carry on a general navigation business on the Great Lakes, rivers and canals of Canada, and waters adjacent thereto, and in connection therewith to own an operate elevators, wharves, docks, shipyards and machine shops. The provisional directors are: J. W. Norcross, D. McGillivray, F. K. Brown, L. Kinnear, J. W. Young, D. E. Evans, R. J. Blackhall, H. J. Mahaffey, W. J. Saurin, DeWitt Carter, T. F. White, O. W. Fares, T. E. Reeb, H W. Boneberg, J. Lannan, J. H. Woods, E. D'A. Woods, J. D. Kinnaird, A. Fehrman, R. Augustine, O L. Steele, of Port Colborne, Ont.; C. A. White, J. O. Wismer, R. H. Appleyard, of Humberstone, Ont. Capt. Norcross informs us that an order has been placed with Wm. Dobson & Son, Newcastle-on-Tyne, Eng., for the construction of a double-deck steamer, with side gangways, and in every respect the latest model of a packet freighter, to pass the canals. Her dimensions are: Length, 256 ft.; breadth, 43 ft.; depth, 26 ft., and she is to be fitted with triple expansion engines; cylinders, 19. 31 and 56 in. diameter, by 36 in. stroke. The steamer will have a double deck, with six hatches on the upper deck and seven hatches between decks, with three gangways doors on each side. She is estimated to cost $250,000 and is to be delivered by Sept. 1. It is stated that the company has an option on the berth for a second vessel of the same size and design, and that it is probably the order will be placed shortly.

The freight and passenger steamers Persia and Cuba, which for a number of years have been operated between Montreal, Toronto and other lake ports, have been sold, and will be transferred to other routes on the opening of navigation. The Persia, which was owned by the Toronto and Montreal Steamboat Co., G. Somerville, Toronto, Manager, has been sold to the Quebec Navigation Co., Quebec, and will in future run between. that city and Montreal. The Cuba was owned by the Montreal and Chicago Merchants Shipping Co., C. A. Jaques, Montreal, Manager, has been sold to the Battle Island Pulp Co., and will be engaged in carrying pulpwood from Quebec to U.S. ports. The Persia, official number 97,013, registered at St. Catharines Ont., built there 1873, and rebuilt 1906, is a wood hull screw steamer with engines of 58 n.h.p., her dimensions being: length, 144 ft.; breadth, 26 2 ft.; depth, 12.2 ft.; tonnage—gross, 757; register, 500. The Cuba, official number 71,153, registered at Kingston, Ont., built at Hamilton, Ont., 1875, and rebuilt 1906, is a wood hull screw steamer, with engines of 200 h.p., her dimensions being: length, 177 ft.; breadth, 26 ft.; depth, 11.5 ft.; tonnage—gross, 931, register, 599. The Merchants Line, in which the Persia and Cuba have hitherto been operated, will have on its route between Montreal and Detroit, calling at Toronto and other intermediate points, the steamers City of Montreal, and the City of Ottawa, owned by the Montreal and Lake Erie Steamboat Co. The first named was the old Anchor Line str. China, and the latter was the old Anchor Line str. India.

Manitoba, Saskatchewan, Alberta, Etc.

The contractors have started operations at the locks which it is proposed to construct on the Red River to overcome the St. Andrew's rapids.

The old ferry which has been operated for several years on the Saskatchewan river at Saskatoon, Sask., is being run again this season. It was expected that the traffic bridge would have been completed, and so have obviated the necessity of the continued operation of the ferry.

The Craven and other Saskatchewan Boards of Trade have passed resolutions asking the Dominion Government to provide for the dredging of Lost Mountain Lake, so as to open it for navigation. It is proposed to place some freight steamers and barges on the lake if the improvements are carried out.

The Winnipeg City Council is applying for authority to construct a bridge across the Red River in the parish of St. John. The Board of Trade, at the request of vessel owners trading on the river, is urging that the interests of navigation be fully safeguarded, especially in view of the improved navigability of the river when the St. Andrew's locks are completed. The Minister of Marine has informed the Winnipeg City Council that the plans cannot be approved, and the council has appointed an engineer to report as to the cost of the alterations necessary to comply with the government requirements for the protection of navigation.

Z. Malhoit, of the Department of Public Works engineering staff, has completed an inspection of the upper part of the Athabasca River to the Lesser Slave Lake. A sum has been authorized to be expended in cleaning out the bed of the river by removing boulders, snags, etc.; and also by building wing dams for the purpose of confining the water to one channel, thus greatly improving the navigation. The intention of the department is to render it possible for steamers to navigate the river from Athabasca Landing to its confluence with the Lesser Slave River, thence up to the extreme western end of Lesser Slave Lake.

The application of the International Canal and Power Co. for an act of incorporation, was referred by the Senate to a Special Committee for consideration, at the recent session. The company asked for power to construct a waterway from Thunder Bay on Lake Superior to Edmonton, Alta., via Rainy River, Lake of the Woods, Winnipeg River, Lake Winnipeg, Cross Lake, Grand Rapids, Cedar Lake and Saskatchewan River. It also provided for the deepening and widening of the Assiniboine River to Brandon, and all other works necessary for the construction and maintenance of a navigable waterway between the points named, and to Lake Winnipegosis and Manitoba. The company also desired to have authority to utilize for various purposes the water powers developed along the line of the canal.

The Imperial Privy Council has dismissed the appeal of the owners of the steamer Longford, against the Canadian Forwarding and Export Co. The action arose out of the chartering of the steamer in 1902, at £760 per calendar month. The payment due Sept. 11 was not paid until Oct. 2, in Montreal, and it was stated that Maclean, Kennedy & Co., as agents, waived the withdrawal of the steamer from charter owing to the money not having been paid when due. The captain withdrew the steamer Oct. 4, and the Quebec courts awarded the Canadian Forwarding and Export Co. $3,597.22 as damages. The C. F. and E. Co. went into liquidation in Dec., 1902, and in Feb., 1903, an order was obtained authorizing the liquidator to go on with the action for damages. The judgment of the Quebec Court has been upheld by the decision of the Privy Council.

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LIST OF STEAM VESSELS REGISTERED IN CANADA FROM MAR. 15, 1907, TO APR. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
City of Ottawa	122,018	Ottawa, 1871	Screw, 80 N.H.P.	220.0	32.5	14.0	1529	838	Buffalo, N.Y.	Montreal & Lake Erie S.S.Co., Ld., Toronto
Iola	122,220	Toronto, 1903	"	37.0	10.3	4.2	13	9	Hamilton, Ont.	J. Lovell et al, Toronto
Mareo	122,264	Montreal, 1906	" 1 N.H.P.	31.3	6.1	2.2	5	4	Sorel, Que.	Hercule Dupre, Montreal
Victor	121,778	Winnipeg, 1906	" 3 "	52.0	12.0	4.5	26	18	The Landing, Man.	Manitoba Gypsum Co., Ltd., Winnipeg
Wissahickon	117,084	Collingwood, 1876	" 120 "	244.4	35.6	14.8	1745	1108	Buffalo, N.Y.	W. Carmichael, Collingwood, Ont.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM MAR. 15, 1907, TO APR. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons	Home Port.	Owners.
E. J. Fader No.3	122,191	New Westminster, B.C., 1907	Barge	85.0	24.0	7.0	143	143	New Westminster, B.C.	Torpedo Freighting & Tug Co., Ltd., New Westminster, B.C.
Germainnia	121,941	Sorel, 1906	Sloop	104.7	22.8	7.2	122	110	Yamaska, Que.	E. Mondon, Alienakis Springs, Que.
Mary Bell	122,181	Arichat, 1906	Schr.	49.0	16.8	7.0	38	38	Martinique, N.S.	W. Carmichael, Collingwood, Ont.

B.C. and Pacific Coast Marine.

The British tug Tartar has been purchased for the B.C. coast towing service, and is expected in Vancouver by the end of May.

The name of the str. Unican, official number 111,986, registered at Vancouver, B.C., has been changed by order-in-council to that of Belcarra.

The tug Isaac has been purchased by Robt. Curnew and J. S. Hutton, New Westminster, and will be operated in the river and sound towing business.

The wreck of the Norwegian str. Themis, lying on the rocks off Scarlet Point, Balaclava Sound, B.C., has been bought for about $500 by the B.C. Salvage Co., Esquimalt.

The Barque Antiope Co., Victoria, B.C., has sold the vessel of that name to Capt. P. J. L. Mathieson, Sydney, New South Wales. The barque is 1,380 tons register, and was built at Port Glasgow, Scotland, 1866.

It is reported at Vancouver that the company being organized to build a floating dry dock there has let a contract for the construction of the dock to Swan and Hunter and Wigham-Richardson Co., Newcastle-on-Tyne, Eng.

The str. Leelanaw will be put on the Nome and St. Michael service at the opening of the current season of navigation. The vessel will tow one of the three barges, John C. Potter, Two Brothers and Oregon, on each voyage north.

The Sutton Lumber and Trading Co. has filed with the Minister of Public Works at Ottawa, as required by the Navigable Waters' Protection Act, plans of the works which it proposes to carry out for the improvement of Kennedy River, Vancouver Island.

The estimates submitted to the British Columbia Legislature for the year ending June 30, 1908, provide for $20,760 for ferry services at 16 points, and for steamboat services on the Columbia River above Revelstoke and above Golden, and on the North Thompson River.

The F. Graham Lumber Co. is applying for a grant or lease of foreshore and submerged lands in Esquimalt harbor, B.C., for the purpose of erecting a saw mill, bridge and wharf. The plans for the latter show a structure 100 ft. wide, extending 522 ft. southerly, and 300 ft. easterly, forming an L.

By the merging of the Alaskan Steamship Co. and the Northwestern Steamship Co., over 20 steamers have been brought under one management. The first named serves south-eastern Alaska with Skagway at the northern terminus, while the latter covers the Valdez-Seward and Nome routes.

The material has been delivered at Vancouver for the construction of the new steamer for the Canadian Hydrographic survey. The steamer was fully described in our issue of Oct., 1906, pg. 607, and Nov., 1906, pp. 687 and 689. The contract for the construction of the steamer has been partially sub-let by the B. C. Marine Ry., Esquimalt. The frame work will be done by H. House, but his men will not do any riveting of the plates.

The boiler of the str. Beaver, built on the Thames, Eng., 1835, for the Hudson's Bay Co., and the pioneer steamer on the Pacific coast, has been raised, and it is proposed to have it preserved as a relic at Vancouver, B.C. The Beaver was wrecked at the mouth of Burrard Inlet July, 1888, and nothing was done until 1906 to recover the boiler. The boiler has a value aside from its historic associations. It has a height of 22 ft. 9 in., while its steam pressure is only 15 lbs. to the square inch; an upright superheater permitting the heat from the furnace to pass through the centre to superheat and dry the steam; double safety valves, one for the escape of over steam pressure, the other as an intake or collapsible valve, it being generally understood that as steam went down and out of the boiler, it was necessary to provide for the atmosphere pressure and thus prevent a collapse.

The President of the United States has appointed an Inland Waterways Commission, and the Lakes-to-the-Gulf Deep Waterways Association, at a meeting in Chicago, Ill., April 4, spent some time discussing the importance of the projected canal from Chicago by the Mississippi Valley, to the Gulf of Mexico, in connection with the work of the Commission. A special advisory committee, consisting of the Governors of the States through which the projected waterway would pass, was appointed. The next meeting of the Association will be held at Memphis, Tenn., Nov. 21.

An amendment to the Canadian Shipping Act has been passed by the House of Commons providing that if a seaman or an apprentice lawfully engaged or bound to any ship registered in any of the provinces at the time of the offence, commits any of the prescribed offences, he shall be liable to the customary penalties on summary conviction. The present law contains the words "provided he has entered into articles with the ship when she was a registered Canadian ship." The necessity for an amendment became apparent owing to a recent case in British Columbia in which the seamen were discharged by the court upon its being proved that they signed articles in Christiania, Norway, before the vessel came to Vancouver, B.C., to engage in whaling

Notices to Mariners.

The Department of Marine has issued the following notices:

No. 18.—Mar. 18.—British Columbia—52. Queen Charlotte Islands, Hectali Strait, Skincuttle inlet, uncharted rock, wharf.

No. 13. Mar. 4.—Quebec—36. River St. Lawrence, ship channel between Quebec and Montreal, Ile du Pads, range lights established.

No. 19.—Mar. 20.—British Columbia—53. Vancouver Island west coast, Barkley Sound, Seehart channel, eastern entrance, small rock, light re-established.

No. 17. Mar. 14.—Nova Scotia—48. Bay of Fundy, north entrance to Digby Gut, whistling buoy established. 49. South coast, Port Bickerton, wrecks removed.

No. 12. Mar. 1.—Ontario Lighthouse Division—33. Quebec—River St. Lawrence, Lake St. Louis, Lachine lightship replaced by gas buoy. 34. Quebec, River St. Lawrence, Lake St. Louis, off St. Nicholas Island, gas buoy established. 35. Quebec, Ottawa river, St. Anne lock, lights.

No. 15. Mar. 7.—New Brunswick—40. South coast, Bay of Fundy, St. John harbor, Intercolonial Ry. wharf, light established. 41. South coast, Bay of Fundy, Chignecto channel, Anderson hollow, light to be established on breakwater. Labrador.—42. East coast, St. Lewis sound, Great Island, flagstaff disappeared.

No. 16. Mar. 13.—Ontario Lighthouse Division—44. Quebec, River St. Lawrence, Lake St. Francis, Knight Point and Grosse Point lights, correction of sailing directions. 45. Quebec, River St. Lawrence, Lake St. Francis, off Grosse Point, gas buoy established. Ontario—46. River St. Lawrence, Howe Island, cold bath shoal, gas buoy established.

No. 20. Mar. 22.—New Brunswick—54. Bay of Fundy, Gannet rock, bombs to be fired more frequently. Nova Scotia.—55. South coast, Jordan River, Jordan Bay, east side, light established on breakwater. Newfoundland.—56. South coast, Placentia Bay, Burin harbor approach, Iron Island, fog bell discontinued. 57. South coast, Rose Blanche harbor entrance, Caines Island, change in duration of blasts and intervals between blasts of fog alarm, light to be established. 58. South coast, Port Aux Basques harbor, west Baldwin rock, change in color of buoy.

Replying to a question in the Senate, April 9, Senator Scott said the Government had no intimation that the U.S. Government wished to take the international boundary waters questions from the Waterways Commission to which the problems of the St. Lawrence system was referred in 1905, and all other international waterways questions more recently.

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Upper Ottawa Steamboat Company.

This company has its offices at New Liskeard, Ont., its officers and directors for the current year being: President, W. J. Blair; Vice-President, F. W. Hendry; other directors: F. S. Brickenden, M. R. Jennings, New Liskeard; M. P Wright, Haileybury, Ont.; J. D. Kingston, Latchford, Ont.; J. J. Foran, Murray City, Ont.; Secretary-Treasurer and Manager, F. H. Norris. The company acquired the property and business of the White River Mail Line, owned by Brickenden and Hendry, for $20,000, payable $10,000 in cash and the balance in fully paid-up shares. The property included the steamers Geisha, Gipsy and Blanche, with a number of scows, lifeboats, and pointers, together with docks, warehouses, storehouses, tools, etc. F. S. Brickenden and F. W. Hendry remain with the company under contract for at least three years. During the coming season it is proposed to make two round trips daily, instead of one as in 1906, between New Liskeard, Haileybury, and Tomstown, a boat leaving both New Liskeard and Tomstown each morning at seven o'clock, returning the same day. The Geisha will run on Larder Lake in connection with the company's stage line from Tomstown and Boston. We were advised April 11 that the company has got its steamers transferred to Larder Lake and Long Lake ready for the opening of navigation; it has also got three steamers ready for launching on the Montreal River, and it is expected also to have one or two steamers on Lake Temiskaming for a general towing trade, and also a fast steam yacht for private charter.

Marine Notes from the Twin Ports.

Our Port Arthur correspondent wrote April 10: The recent cold weather has dissipated all hopes of an early opening of navigation. The ice field extends in an unbroken expanse out to Isle Royale. It is 24 to 30 inches thick at Thunder Cape, 32 to 36 inches at Welcome Islands, and averages 20 inches in the Kaministikwia River at Fort William, with no signs of weakening. Unless exceptionally favorable weather sets in, it will be May 1 before a boat can reach here from the outside, notwithstanding all the ice-breaker can do

The ice-breaker James Whalen has been engaged for the past three days in breaking a passage to Fort William, for the purpose of transferring vessels from their winter berths to the elevators to load grain. The pressure on the capacity of the elevators is so great that they are anxious to load vessels at the earliest possible date.

Port Arthur and Fort William elevators are practically full, 11,000,000 bushels of wheat, oats and barley being in store. This, together with what is in store in inland elevators, in farmers' hands and on the track will bring the balance of the crop of 1906, to go forward by the lake route, well up to 40,000,000 bush., and ought to insure a prosperous season for vessel owners.

The Shipping Federation of Canada has made an official request to the Dominion Government to establish submarine signal stations at 23 points on the St. Lawrence River, the Bay of Fundy and the Nova Scotian coast.

A question was asked in the House of Commons, April 10, in connection with the placing of the U.S. cruiser Detroit on the Great Lakes, but the acting Premier treated the matter as one requiring special notice. The question involved is an international one, and involves the interpretation of a convention between Great Britain and the U.S., under which neither power will maintain war vessels on the lakes.

Great Lakes Insurance Losses in 1906.

A list of losses and accidents to vessels on the Great Lakes during the season of navigation of 1906 shows that 47 vessels, with a carrying capacity of 58,165 gross tons and valued at $976,000, were total losses, of which 11 were Canadian vessels of 6,607 register tonnage and valued at $248,500. The monetary loss was low in comparison with former years owing to the fact that the wrecked vessels were nearly all small. The list of wrecks as published by the Marine Review gives the following details:

April 20.—Str. Donnacona, owned by R. O. and A. B. McKay, Hamilton, Ont., stranded, but released without injury April 22.

April 25.—Str. Iroquois, owned by St. Lawrence and Chicago Steam Navigation Co., Toronto; broke steering gear; steel plates badly damaged and rudder and shoe lost; put into dry dock at Collingwood, Ont.

April 25.—Str. Robert Wallace, owned by Great Lakes and St. Lawrence Transportation Co., Chicago, Ill.; stranded; leaked slightly, but cargo was uninjured; released April 26.

April 28.—Schooner Anne Marie, owned by D. Gillies, Carleton Place, Ont.; stranded.

May 2.—Str. Midland Queen, owned by Midland Navigation Co., Midland, Ont.; collision with str. Wm. G. Mather; about 14 plates were damaged and taken off; not docked, damage being above water line; repaired at Wyandotte, Mich.

May 14.—Str. Huronic, owned by Northern Navigation Co., Collingwood, Ont.; struck just before entering Canadian canal, Sault Ste. Marie; several plates on starboard side damaged; released May 15 and placed in dry dock at Detroit, Mich., May 18.

May 19.—Schooner J. J. Barlum, operated by Algoma Central Steamship Line, Sault Ste. Marie, Ont.; taken to Sault Ste. Marie May 21, after making temporary repairs.

May 22.—Str. H. M. Pellatt, owned by Canadian Lake and Ocean Navigation Co., Toronto; grounded; cargo lightened.

May 27.—Str. Midland Queen, owned by Midland Navigation Co.; ran ashore in storm but was released later in day; uninjured.

May 31.—Str. Erin, owned by J. and T. Conlon, Thorold, Ont.; sunk in collision with str. John B. Cowle; total loss.

June 18.—Schooner Oliver Mitchell, owned by J. Reid, Sarnia, Ont.; collision with str. Prince.

July 9.—Str. Midland King, owned by Midland Navigation Co.; collision with str. Northern Wave; not injured.

Aug. 8.—Str. Alexandria, owned by Ontario and Quebec Navigation Co., Picton, Ont.; broke engine shaft while passing Ogdensburg, N.Y.; towed to Prescott, Ont., for repairs.

Aug. 10.—Str. Erindale, burned while at dock at Bowmanville, Ont.; valued at $14,000; insured for half; total loss.

Aug. 29.—Str. J. G. Sharples, owned by Great Lakes and St. Lawrence Transportation Co.; struck a rock in Wauhegan harbor; stove hole in bow of steamer, causing it to sink; floated Aug. 31; docked for repairs.

Aug. 29.—Schooner Fleetwing, owned by J. Marks, Windsor, Ont.; was found leaking and abandoned near Centre Island, Toronto.

Sept. 11.—Str. Rosemount, owned by Montreal Transportation Co., Montreal; ran on rocks near Detour lighthouse; released Sept. 14 and went on to Sault Ste. Marie; docked Sept. 26 for repairs; 17 plates damaged and repairs quite expensive.

Sept. 18.—Str. Melrose, owned by Montreal Transportation Co.; stranded at Sault Ste. Marie, Ont.; released after lightening 5,000 bush. of grain; temporarily repaired and proceeded on her journey.

Sept. 20.—Str. Turret Cape, owned by Canadian Lake and Ocean Navigation Co.; went into dry dock at Lorain for repair to bottom plates, which were damaged by steamer striking in the Welland canal; left dry dock Sept. 26.

Sept. 26.—Passenger str. City of Windsor, owned by D. L. McKinnon, Sudbury, Ont.; badly damaged by fire while lying at the dock, Owen Sound, Ont.

Oct. 5.—Str. Winona, owned by R. O. and A. B. McKay; ran on rocks at Giant's Tomb shoal, off Christian Island.

Oct. 5.—Str. John Crerar, owned by Great Lakes and St. Lawrence Transportation Co.; broke her rudder while entering Niagara river and was towed to Tonawanda, N.Y.

Oct. 8.—Str. Benton, owned by Capt. W. J. Willoughby, Goderich, Ont.; ran aground near North Bass Island, Lake Erie, while out in storm; released herself Oct. 10.

Oct. 8.—Barge May Richards, owned by Capt. W. J. Willoughby; grounded near North Bass Island, Lake Erie, in storm; filled with water, total loss.

Oct. 10.—Str. Athabasca, owned by C.P.R. Co.; lost signal lights and had rigging badly damaged in storm on Lake Superior.

Oct. 10.—Str. Neepawah, owned by R.O. and A. B. McKay; her cargo of machinery damaged to the extent of $4,000 while she struggled through a severe storm on Lake Huron, but vessel not damaged.

Oct. 23.—Schooner Corisande, owned by J. B. Miller, Parry Sound, Ont.; collided with str. Mariska abreast of Sarnia; towed to Wolverine dry dock, Port Huron, Oct. 25.

Oct. 29.—Schooner Vienna, owned by F. H. and T. E. Laird, Dresden, Ont.; sprang a leak in Lake Michigan and sank; total loss.

Nov. 4.—Str. Bickerdike, operated by Merchants' Line, Montreal; ran on rocks three miles below Alexandria Bay, St. Lawrence River.

Nov. 12.—Barge Quebec, owned by Montreal Transportation Co.; went ashore near Charlotte, Lake Huron.

Nov. 14.—Str. Strathmore, owned by G. Plunkett, Cobourg, Ont.; wrecked at Michipicoten, Lake Superior; total loss.

Nov. 14.—Str. Seguin, owned by J. B. Miller, Parry Sound; collided with barge Bell in St. Clair River, and sank at Sarnia; big hole torn in her side.

Nov. 17.—Str. Winona, owned by R. O. and A. B. McKay; ashore at Graham shoal beach, Manitoulin Island; released Nov. 19 and taken to Collingwood for repairs; arrived there Nov. 30 and put in dry dock; abandoned to underwriters and sold.

Nov. 17.—Str. Theano, operated by Algoma Central Steamship Line; struck a rock near Thunder Cape, Lake Superior; total loss.

Nov. 19.—Str. Fairmount, owned by Montreal Transportation Co.; two plates loosened while out in storm on Lake Superior; stopped at Fort William, Ont., for repairs, which took one day to make.

Nov. 22.—Str. Resolute, operated by Deseronto Navigation Co., Deseronto, Ont.; foundered in Lake Ontario during a storm; sprang a leak; six lives lost; vessel total loss.

Nov. 26.—Barge Agawa, operated by Algoma Central Steamship Line; broke away from str. Leafield, near Eagle Harbor, Lake Superior, in storm; picked up Nov. 28 and taken to Sault Ste. Marie; not damaged.

Nov. 28.—Str. Turret Crown, owned by Canadian Lake and Ocean Navigation Co.; went ashore near Grand Marias, Lake Superior; released Nov. 30; docked at Cleveland, Ohio, Dec. 5, for repairs.

Nov. 30.—Schooner Queen of the Lakes, owned by Richardson & Sons, Kingston, Ont.; sprang a leak while navigating in storm on Lake Ontario; sank; total loss.

Dec. 1.—Car ferry Ashtabula, owned by Pennsylvania and Ontario Steamship Co., Ashtabula, Ohio; coal cars became loose

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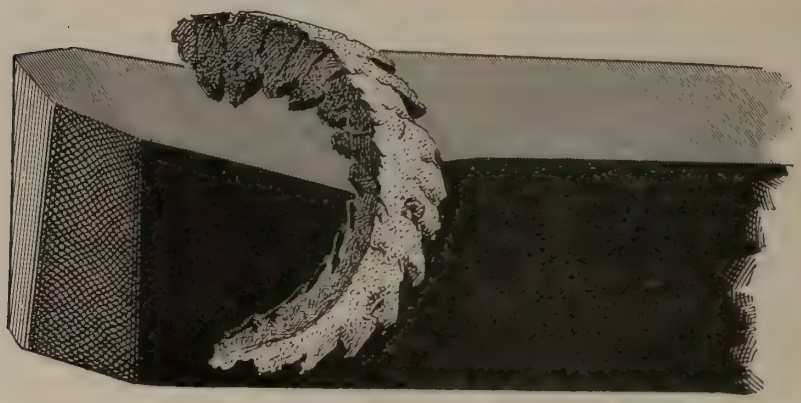

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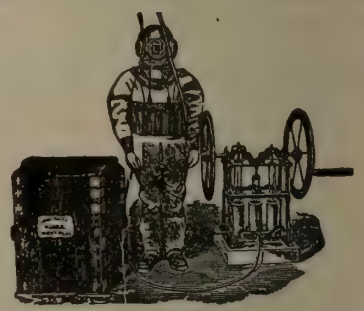

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and crashed into bumping post at Ashtabula; vessel was slightly raised for repairs to her propeller wheels.

Dec. 6.—Barge Wawanosh, owned by Sarnia Transportation Co., Sarnia, Ont.; broke away from tug Spencer and ran aground near Oscoda, Lake Huron; total loss.

Dec. 7.—Str. Golspie, operated by R. O. and A. B. McKay, Hamilton, Ont.; stranded in Brule Bay, Michipicoten, Lake Superior; total wreck.

Dec. 9.—Str. Monarch, owned by Northern Navigation Co.; went ashore on Isle Royale, Lake Superior, one man drowned; total loss.

Dec. 10.—Str. Caribou, owned by United States and Dominion Transportation Co. (A. Booth & Co.), Chicago, Ill.; disabled near Killarney, Georgian Bay, and towed to Owen Sound, Ont.

Dec. 28.—Car ferry Ashtabula, owned by Pennsylvania and Ontario Steamship Co., Ashtabula, Ohio; ran ashore near Port Burwell, Ont., Lake Erie; released Dec. 30, not damaged.

Following are some particulars of the vessels which are given as total losses, taken from official and other sources:

ERIN.—Official number, 83,142; registered at St. Catharines, Ont.; T. Conlon, Thorold, registered owner. Built at St. Catharines, 1881; screw steamer with engines of 75 n.h.p. Dimensions: length, 174 ft.; breadth, 26 ft.; depth, 12.6 ft.; tonnage—gross, 651; register, 411. Value, $16.000.

ERINDALE (ex-City of Owen Sound).—Official number, 107,598; registered at Owen Sound, Ont.; Trusts and Guarantee Co., Toronto, being the registered owners. Built at Montreal, Que., 1867; rebuilt at Owen Sound, 1900; paddle wheel steamer with engines of 43 n.h.p. Dimensions: length, 129.3 ft.; breadth, 24.3 ft.; depth, 10.6 ft; tonnage—gross, 754; register, 444. Value, $12,000.

FLEETWING.—Official number, 90,776; registered at Windsor, Ont.; J. Cochrane, Colborne, Ont., registered owner. Built at Wilson, N.Y., 1863; schooner. Dimensions: length, 108 ft.; breadth, 24.6 ft.; depth, 7.9 ft.; registered tonnage, 162. Value, not given.

GOLSPIE (ex-Osceola).—Official number, 112,204; registered at Hamilton, Ont.; W. Magee, Hamilton, registered owner. Built at Bay City, Mich., 1882; screw steamer; engines, 69 n.h.p. Dimensions: length, 183.5 ft.; breadth, 33.9 ft.; depth, 13.5 ft.; tonnage—gross, 1,122; register, 709. Value, $20,000.

MONARCH.—Official number, 96,843; registered at Sarnia, Ont.; Northern Navigation Co. of Ontario, Collingwood, registered owners. Built at Sarnia, Ont., 1890, screw steamer. Dimensions: length, 240 ft.; breadth, 32.2 ft.; depth, 5.4 ft.; tonnage—gross, 2,017; register, 1,372. Value, $85,000.

QUEEN OF THE LAKES.—Official number, 77,626; registered at Kingston, Ont.; G. A. Richardson, Kingston, Ont, registered owner. Built at Portsmouth, Ont., 1853; schooner. Dimensions—length, 128 ft., breadth, 23.3 ft.; depth, 10.3 ft.; register tonnage—190. Value, $5,000.

RESOLUTE.—Official number, 88,241; registered at Deseronto, Ont.; the Rathbun Co., Deseronto, registered owners. Built at Deseronto, 1883; screw steamer, with engines of 230 n.h.p. Dimensions: length, 136.6 ft.; breadth, 27.8 ft.; depth, 10.3 ft.; tonnage—gross, 372; register, 262. Value, $12,000.

STRATHMORE (ex-Gordon Campbell).—Built at Detroit, Mich., 1871; was lying idle for years; 1,600 tons, register. Value, $17,500.

THEANO.—Not on the Canadian register. Built in Great Britain 1889, and carried on the British register; Algoma Central Steamship Line. Length, 255 ft.; breadth, 36 ft. Tonnage—952 tons register. Value, $80,000.

VIENNA.—Official number, 90,558; registered at Bowmanville, Ont.; F. H. and T. E. Laird, Dresden, Ont., registered as joint owners. Built at Port Burwell, Ont., 1871; schooner. Dimensions: length, 102 ft; breadth, 23.5 ft.; depth, 8.5 ft.; register tonnage, 135. Value, $1,000.

WAWANOSH.—Official number not given; registered at Sarnia, Ont.; J. King, Sarnia, Ont., registered owner. Built at Sarnia, 1873; schooner. Dimensions: length, 138 ft.; breadth, 26.2 ft.; depth, 12 ft.; register tonnage, 370. Value not given.

The heavy losses incurred in respect of lake business within the past two years, according to Shipping Illustrated, has prompted English underwriters to advance the rates on lake vessels. Under a new agreement just reached, owners will have to pay an increase of 10% owing to the increase in valuation. The policy used in 1905 is substituted for that of 1906. which was more liberal, and policies will thus run until Dec. 5, instead of Dec. 12. Besides, vessels must sustain losses amounting to $500 before there is any claim against the underwriters. Thus owners will be cut off from collecting for small losses, will lose a week of profitable business in Dec. under their policies, and then must pay a much higher rate. In addition the change in the form of policy is much to their disadvantage in many ways. The rates on first-class steamers have been advanced to 4½% and valuations increased from $42 per gross ton to $48.50.

Among the Express Companies.

The Dominion Ex. Co. has been registered at Regina, Sask., under the ordinance of the North-West Territories respecting foreign corporations.

All tariffs, except joint tariffs of tolls between Canada and points outside of Canada, had to be filed by express companies by May 1 with the Board of Railway Commissioners for Canada. All other tariffs must be filed with the Railway Commission and approved by July 1.

The Dominion Ex. Co., having ceased to operate over the Qu'Appelle, Long Lake and Saskatchewan Ry., is not now reaching the following points direct: Adamson, Aylesbury, Bethune, Bladworth, Chamberlain, Clark's Crossing, Clouston, Condie, Craik, Craven Jct., Davidson, Disley, Duck Lake, Dundurn, Findlater, Girvin, Hague, Hanley, Hamilton, Lumsden, Osler, MacDowell, Kenaston, Prince Albert, Nutana, Rodderick, Rosthern, Timms, Valley, Verdi, Warman, Saskatoon and West Prince Albert, Sask.

Telegraph and Cable Matters.

C.P.R. telegraph operators have been granted an all-round increase of $5 a month.

The U.S. Government has arranged to establish six wireless telegraph stations in Alaska.

W. Clausen-Thue, who was the author of the A.B.C. and the A1 telegraphic codes, died recently.

W. Bamfield, General Manager North American Telegraph Co., died at Kingston, Ont., April 13, aged 57.

The French cable repair steamer Coutre Amiral Canbert, which had been repairing the St. Pierre-Miquelon cable, was in St. John, Nfld., recently for repairs.

The G.N.W. Telegraph Co. has been granting increases to its employes in Toronto, each case being treated individually. The operators asked for an increase of 15% and for shorter hours.

A new cable is being laid across the Big Bras d'Or, N.S., by the str. Merrimac, to replace the broken cable. The cable is part of the Dominion Government Telegraph system in Nova Scotia.

I. McMichael, Vice-President and General-Manager, G. N. W. Telegraph Co., Toronto, was unable to be present at the annual reunion of the U.S. Military Telegraphers, held at New York, Mar. 28.

S. Edwards was presented with an oak desk and cabinet by the employes of the C.P.R. Telegraph Department, Calgary, Alta., April 1, on leaving the service to take charge of the Alberta Government telephone lines.

J. McMillan was presented with an address and a gold watch by the C.P.R. telegraph staff at Winnipeg, Mar. 30, on leaving to take up his new duties as Superintendent Western Division C.P.R. Telegraphs, Calgary, Alta.

The Anglo-American Telegraph Co. is suing the Reid Newfoundland Co. to recover $293,650 for alleged improper use of the company's telegraph line in carrying on the business of the Reid Newfoundland Co.'s railway and steamers.

W. H. Jenkins, formerly chairman of the Educational Council of Ont., and Registrar in the Education Department, Toronto, who died at Madoc, Ont., Mar. 23, was a brother of B. S. Jenkins, General Superintendent C.P.R. Telegraphs, Winnipeg.

W. H. Baker, Vice-President and General Manager, Postal Telegraph Cable Co., New York, has resigned, but will continue to be associated with the company in an advisory capacity. He is succeeded as Vice-President and General Manager by E. J. Nally.

The C.P.R. Telegraph Department put in force April 1, a reduction of rates to and from Sturgeon Falls, Cache Bay, Verner, Warren, Markstay, Wahnapitae, Romford, Sudbury and Copper Cliff, Ont., from 50c. to 25c. for 10 words, and 1c. for each additional word.

J. McMillan, heretofore Assistant Superintendent Central Division C.P.R. Telegraphs, Winnipeg, has been appointed Superintendent of the Western Division, Calgary, Alta., succeeding S. Edwards resigned. He is succeeded at Winnipeg by R. N. Young.

The new Marconi Wireless Telegraph station at Cape Race, Nfld., has been completed. The building is two stories, 30 by 30 ft., containing two instrument rooms, battery and storerooms. The two poles are 500 ft. apart, and are each 180 ft. high. They hold 16 aerial wires. A nine horse power gasoline engine has been installed for charging the batteries. The equipment has a range of communication of 1,000 miles. There will be four operators at the station.

The total length of telegraph lines in operation in the Dominion is given in the report of the Department of Public Works for the year ended June 30, 1906, as follows:

	Length of Lines miles	Length of Conductors miles	Offices
C.P.R. Telegraphs	10,294	50,952	1,150
Government Telegraphs	6,829	6,829	343
Great Northwest Telegraph Co.	11,775	44,573	1,360
Western Union Telegraph Co.	2,638	9,805	219
Total	31,536	112,159	3,072

The C.P.R. has 57 miles and the Western Union 44 miles of underground conductors. The mileage of the Canadian Northern Telegraph Co., which is operating a commercial telegraph business over the Canadian Northern Ry., and of the Temiskaming and Northern Ontario Ry., which is doing a commercial business from North Bay into the New Liskeard district, have been overlooked by the department in making out its figures

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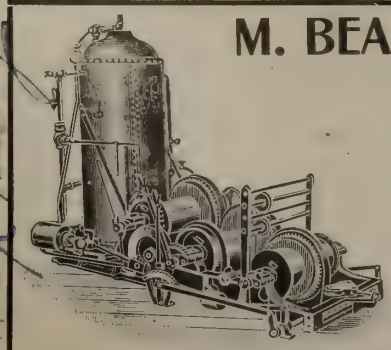

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The Dominion Telegraph Lines.

The Dominion Government operates 6,829¼ miles of land telegraph lines, and 345¾ knots of cable through the telegraph department of the Department of Public Works. In this total there have not been included lines that have been subsidized or constructed and transferred by the Government for operation by private companies. The lines are distributed as follows:

	Land lines miles	Cables knots	No. of Offices
Newfoundland	14	.....	2
Nova Scotia	586½	24½	45
New Brunswick	457¼	11	44
Quebec	1,507¾	291	97
Ontario	25½	17	9
Northwest	957½	.....	32
British Columbia	1,028¼	2¼	48
Yukon	2,252½	.....	66
Total	6,829¼	345¾	343

The line in Newfoundland extends from Cape Ray lighthouse to Port au Basque, where it connects with the Anglo-American Telegraph Co.'s land lines, and is operated in connection with the signal service. A cable 20 knots long connects Meat Cove, N.S., with St. Paul's Island, and is operated by telephones. North Sydney, N.S., is a transfer office connecting with the Western Union Telegraph Co.'s system. In connection with the signal service a land line 208 miles long was erected in 1881, between Canso and Halifax, N.S., for a bonus of $16,000 and is maintained and operated by the Western Union Telegraph Co., without further cost to the Government. The line in Ontario is operated by telephone, and affords communication between Pelee Island and the mainland at Leamington. Of the lines in the Northwest, a seven mile branch from Andrew to Whitford is operated by telephone, and some 62 miles of branch lines in the vicinity of Edmonton, Alta., are operated by the Edmonton District Telephone Co. The local system in the National Park at Banff, Alta., is operated as a telephone system, and is looked after by the Superintendent. The Kamloops-Lower Nicola line, 235 miles, is operated as a telephone line, and the Vernon-Kilowna line, 35 miles, is operated both as a telephone and telegraph line. Telephone connections are given for a number of firms at various points on the Victoria-Cape Beal line, and other lines on Vancouver Island, while the Vancouver and Salt Spring line, 24¾ miles, is being worked by telephone for the present merely for general convenience. There was no important addition to the length of the telegraph lines during the year ended June 30, 1906, the expenditure on new construction being only $57,000.

The revenue received from the operation of these lines during the year ended June 30, 1906, was $103,300.38 and the expenditures were $409,173.60. The messages of the signal service, meteorological services, messages and reports and fisheries bulletins, are handled over the lines free of tolls. The expenditure includes the maintenance of the cable repair str. Tyrian for the Maritime Provinces and Lower St. Lawrence lines. The revenue shows a considerable decrease, the income from the Yukon lines showing a falling off of over $38,000. This is ascribed to the active competition of the cables and land lines constructed by the U.S. Government, and the reduced volume of Canadian business from and to Dawson.

Following is a list of the staff having charge of the operation of the lines: General Superintendent, D. H. Keely, Ottawa; Technical Assistant, M. W. Crean, Ottawa; Accountant, J. P. Demartigny, Ottawa; General Inspectors: A. B. McDonald, Meat Cove, N.S.; J. S. Macdonald, Qu'Appelle, Sask.; J. E. Gobeil, Yukon Division. District Superintendents: E. Pope, Quebec; J. C. Tache, Chicoutimi to Bersemis; E. H. Tetu, Pentecost, Que.; P. Pouliot, Quarantine line, etc., to Grosse Isle, Que.; A. Malouin, West Point, Anticosti Island, Que.; A. L. Bourdais, Grindstone, Magdalen Islands; D. C. Dawson, St. John, N.B.; Mrs. C. C. Seeley, Grand Manan, N.B.; J. McR. Selkirk, Leamington, Ont.; R. C. Macdonald, Qu'Appelle, Sask.; W. Henderson, Victoria, B.C.; C. S. Stevens (Supt.), Kamloops, B.C.; J. Y. Rochester (acting), Vancouver, B.C.; J. T. Phalen, Ashcroft, B.C.; H. Gilchen (acting), Whitehorse, Yukon Territory.

General Telephone Matters.

The Bell Telephone Co is preparing plans for the erection of an addition to its exchange building at Quebec.

N. Belleau, Quebec, has been elected a director of the Bellechasse Telephone Co., succeeding the late N. Rioux.

The Moose Jaw, Sask., Telephone Co. has arranged with residents of Craik to extend its lines to that town.

P. E. Hart has been appointed electrical engineer in charge of the corporation lighting, power and telephone system, Kenora, Ont.

The Falkirk Telephone Co. has been granted permission to erect poles and string wires along highways in the township of London, Ont.

Dr. L. A. Brown and J. A. Saxton have been elected to fill vacancies on the directorate of the South Malahide Telephone Association, Aylmer, Ont.

W. G. Slack, heretofore chief accountant Bell Telephone Co., Montreal, has been appointed Secretary-Treasurer, in place of the late C. P. Sclater.

W. H. Van Doyle, of the Eastern Telephone Co., Sydney, N.S., has been transferred to Halifax in connection with the Nova Scotia Telephone Co.'s system.

The Saskatchewan Telephone and Electric Supply Co. is seeking power to change its name to the Northwest Telephone Co. and to increase its capital stock.

The Harrietsville Telephone Association is making application under the Ontario Companies' Act for a charter of incorporation with a capital of $25,000.

The Kamouraska Telephone Co.'s capital has been increased by supplementary letters patent to $250,000, and it has been given powers to further extend its lines in Rimouski and Matane Counties.

Count Arco, of Berlin, Germany, has succeeded in obtaining distinct exchanges of words in a tolerably natural voice at a distance of two miles, by using poles 30 ft. in height, without connecting wires.

The Bell Telephone Co. is applying to the Toronto City Council for permission to erect poles on a number of streets, and to lay underground wires in John St., from the water front northwards for 200 ft.

A rural telephone line to connect with the Bell Telephone Co.'s system is under construction between Lestrum and Billings Bridge, Ont. It is expected that the line will be extended to Bowesville later on.

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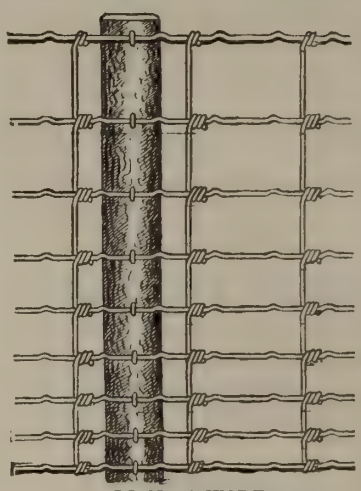

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The Brandon, Man., City Council decided by five to four, April 10, to request the Manitoba Government to construct and maintain a local telephone system in that city in connection with the provincial long distance lines.

The Telephone Co. of Prince Edward Island, at its annual meeting Mar. 21, re-elected its directors and authorized an increase in the capital stock, under the terms of the act passed by the Provincial Legislature in 1906.

The Ottawa City Council has deferred the third reading of the by-law granting a five-year exclusive franchise to the Bell Telephone Co. There is an agitation on foot in the city with a view of obtaining a $20 rate for house 'phones.

The Montreal City Surveyor reported to the City Council, April 9, that there were 34 miles of conduits in the city, 17¾ miles belonging to the Bell Telephone Co., 5¾ miles belonging to the Light, Heat and Power Co., and ½ mile belonging to the C.P.R. Telegraph Department.

The Bell Telephone Co. and the Barrie, Ont., Town Council have reached an agreement for a five years' exclusive franchise from April 15. The company pays $300 a year, provides six free instruments for the council, and gives a uniform scale of prices throughout the town.

C. P. Sclater, who had been Secretary-Treasurer of the Bell Telephone Co. since its formation, died in Montreal, Mar. 24, aged 57. He was also a director of the Northern Electric and Manufacturing Co., Montreal. In 1879 he was Acting Secretary of the Dominion Telegraph Co.

A company is being organized for the construction of a telephone line along the shore of Northumberland Strait from New Glasgow to Pictou, and on to Barney's River, N.S. The proposal is at present only on paper, and nothing of a definite character has been done in connection with the project.

No decision has been reached by the London, Ont., City Council, respecting the proposal to grant an exclusive franchise to the Bell Telephone Co. for a further period of five years. The estimates submitted by the finance committee contain an item of $4,000 to be received from the company on account of a franchise.

The Grand Manan Telephone Co. is asking the Dominion Government to lay a cable from Grand Manan to the mainland, which can be utilized for telephone as well as telegraphic messages. W. A. Fraser, Manager of the company, has been in St. John, N.B., discussing the matter with the Board of Trade.

An endeavor is being made by a number of Nova Scotia and Prince Edward Island business men to organize a company for the purpose of laying a telephone cable between the island and the mainland. The P.E.I. Legislature passed a resolution Mar. 28 recommending that Federal aid be given to the undertaking.

The Manitoba Government and the Winnipeg City Council are discussing the construction of a telephone system in Winnipeg, in connection with the long distance lines which the Government is preparing to build. As the result of the conference the City Council passed a resolution requesting the Provincial Government to construct and operate a telephone system in the city, first submitting its plans for approval.

The Hamilton Rural Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Coldsprings, Ont., to construct telephone lines and carry on a general telephone business in the county of Northumberland. The provisional directors are: F. A. T. Nixon, W. E. Lacey, J. Thompson, T. W. Moore, D. McIntosh, of Hamilton tp., Northumberland county.

The municipality of Miniota, Man., has decided to establish a municipal telephone service at once. It is estimated that about 275 miles of pole line will be required, and that about 400 subscribers at $15 a year each will be obtained. The municipalities of Wallace and South Norfolk, Man., have also taken the initial steps toward installing a local system of telephone lines, to connect with the provincial long distance lines.

The Alberta Government telephone line between Calgary and Banff is reported to

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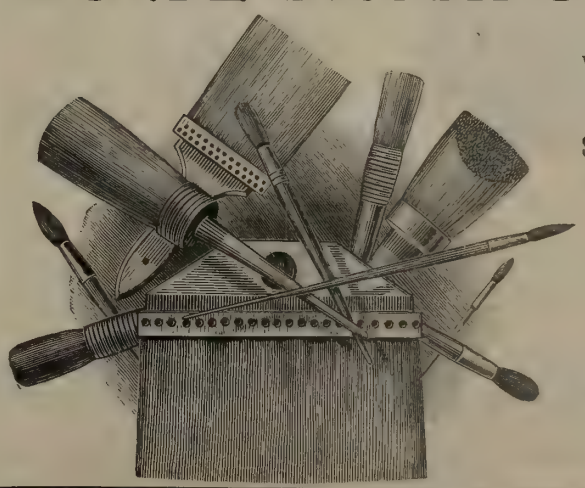

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be practically completed. A local exchange is being established at Banff. The Provincial Government purchased the local exchange at Fort Saskatchewan from the Edmonton City Council, assuming control April 1. S. Edwards, heretofore Superintendent Western Division C.P.R. Telegraphs, Calgary, has been appointed Manager of the provincial telephone lines.

The New Brunswick Telephone Co.'s directors have elected Hon. E. P. Thompson, Managing Director, as President, succeeding the late Dr. Stockton, M.P., and F. B. Carvell, M.P., Woodstock, to the vacancy on the directorate. The newly elected president will continue to act as Managing Director until the amalgamation with the Central Telephone Co. has been completed. A. Seeley, St. John, has been appointed Secretary-Treasurer in place of W. E. Smith.

The Stirling Telephone Co. has been incorporated under the Ontario Companies' Act with a capital of $10,000 and offices at Stirling, Ont., to carry on a general telephone business in the county of Hastings, and the townships of Seymore and Murray in the county of Northumberland. The provisional directors are: C. Thompson, of Rawdon tp., Ont.; H. H. Alger, W. S. Martin, G. G. Thrasher, L. Meiklejohn, Stirling, Ont.; and S. G. Scott, Sidney tp., Ont.

The Charlevoix and Saguenay Telephone Co. has been incorporated under the Quebec Companies' Act, with a capital of $40,000 and offices at Saint Etienne de la Malbaie, Que., for the purpose of constructing telephone lines and carrying on a general telephone business in the counties of Charlevoix, Saguenay, Montmorency and Chicoutimi, Que. The provisional directors are: J., J. E. and C. Warren, Pointe-a-Pic, Que.; A. Larouche, J. E. Duggan, A. E. Coult, N. A. Dassylva, H. Lemieux, J. A. Lapointe, J. E. Maltais, Malbaie, Que.; L. A. Boulaine, P. d'Auteuil, P. Rouchette, Saint Etienne de la Malbaie, Que.

Referring to the construction of telephone lines by the Alberta Government, the provincial Minister of Public Works said, April 4, a crew had commenced work on a line at the western boundary of the Province through the Crow's Nest Pass to MacLeod. This line probably would be extended to Lethbridge in 1908. Work will be commenced immediately on a line from Wetaskiwin to Daysland, and on another from Lacombe to Stettler. As soon as possible work will be started on a line from Edmonton easterly to Lloydminster, and southerly to Calgary. It is expected to have at least 500 miles completed and in operation by the end of the year.

The New Brunswick Government is asking for power at the current session of the Legislature to control the telephone lines in the province. The act provides that the Government may purchase or expropriate telephone lines at their true value plus 10% as compensation to those selling. All telephone companies, one month after filing their annual report, must submit a financial statement of the year's business. If the books show profit of more than 8%, the Government can cause a reduction of tolls The Lieut.-Governor-in-Council is given permission to compel companies to give long distance connections with other lines and to compel them to do business with communities placing three telephones a mile

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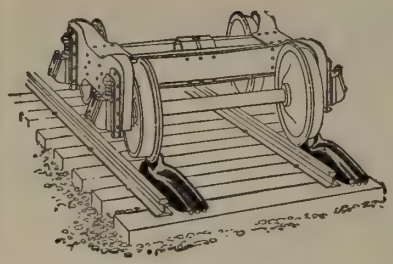

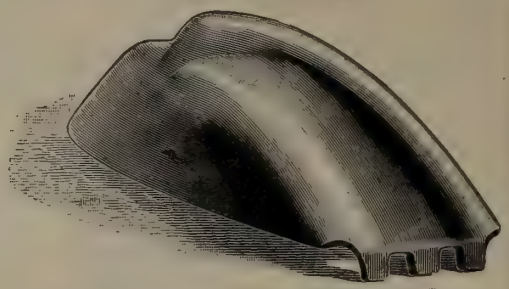

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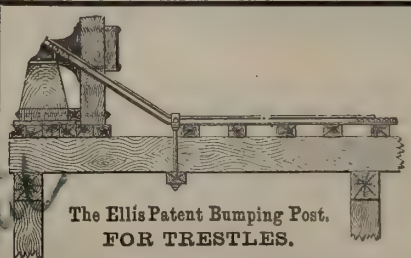

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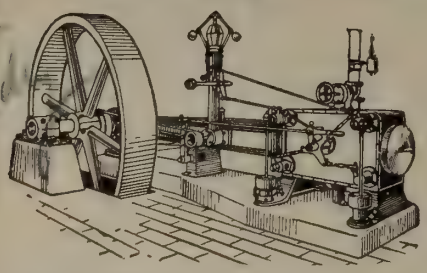

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Flour
The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

Flue Rolling Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Forgings
Canada Car Co., Limited.....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co..Owen Sound, Ont.

Gauges, Locomotive Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Glue Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Grain Elevators
John S. Metcalfe Co.....Chicago, Ill.

Groceries
The Hudson's Bay Company.....

Hammers
James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....
Rice Lewis & Son.....Toronto.

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg, Ont.

Hoisting Machinery
Brown Hoisting Machinery Co....Cleveland, Ohio.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

Hose, Air Brake and Steam
G. S. Wood.....Chicago, Ill.

Hose, Suction
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspection Cars
Canada Cycle and Motor Co..Toronto Junc., Ont.

Inspections
R. W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron, Pig
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
McCord & Co.....Chicago, Ill.

Kalsomine Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Lager Beer, &c.
E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton, Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Lathes
H. W. Petrie.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Lubricators
McCord & Co.....Chicago, Ill.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.
H. W. Petrie.....Toronto.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery, Power
Jno. McDougall,Caledonian IronWorks Co.Montreal

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Mandrel Rolled Hollow Staybolt Iron and Steel Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.

Milling Machines
H. W. Petrie.....Toronto.

Mills, Boring and Turning
H. W Petrie.....Toronto.

Motor Cars
Canada Cycle & Motor Co., Toronto Junc., Ont.

Motors
McCord & Co.....Chicago, Ill.

Motors (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co.....Newark, N.J.

Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Railings
Locked Wire Fence Co.....London, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tanks
S. F. Bowser & Co., Inc.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto.

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.
Mica Boiler Covering Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Planers
H. W. Petrie.....Toronto.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
Independent Pneumatic Tool Co.....Chicago, Ill

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Inc.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H. Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada.....Montreal.
N. J. Holden Co.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Butterfield & Co.....Rock Island, Que.

Reaming Machines
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.

Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal

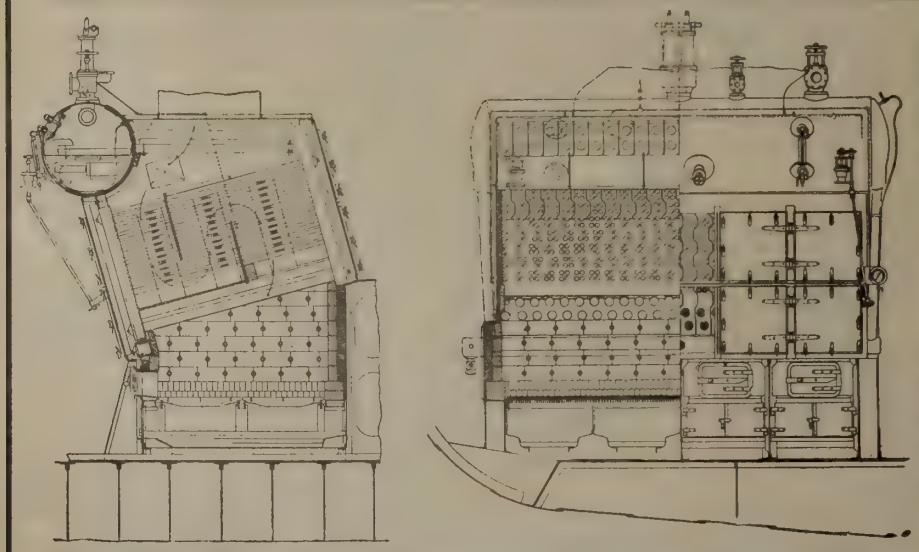
Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal



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The Purchasing Agents' Guide—Continued.

Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co.....Boston, Mass.

Spikes, Railway, Ship or Pressed
F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville, Ont.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm. C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel for Springs
James Hutton & Co.....Montreal

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston, Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co. Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Tool Steel
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Valves, Angle
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Automatic Float
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Valves, Cushioned, non-return
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Reducing
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Columns
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Woodworking Machinery
H. W. Petrie.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

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TORONTO, CANADA, JUNE, 1907

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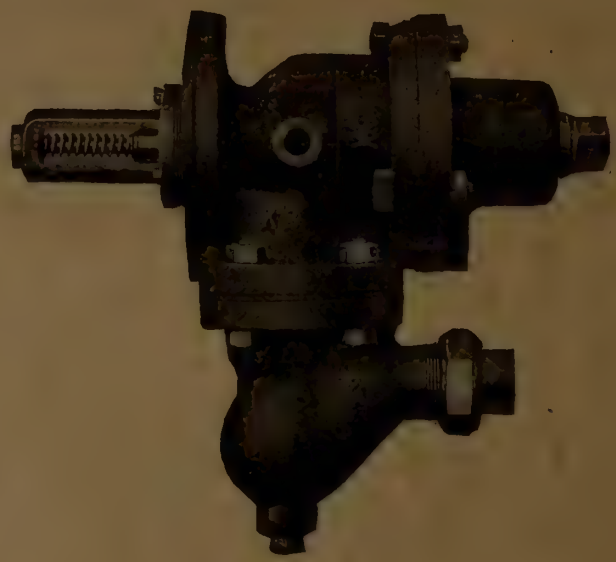

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Recharges all auxiliary reservoirs at a uniform rate.

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See Purchasing Agents' Guide on page 461

See Alphabetical Index to Advertisements on page 423.

THE

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With which are incorporated The Western World and The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' interests

Old Series, No. 194.
New Series, No. 112.

TORONTO, CANADA, JUNE, 1907.

For Subscription Rates, See page 421.

Nova Scotia's Railway Report.

The report of R. McColl, Provincial Engineer of Nova Scotia, for the year ended Sept. 30, 1906, refers at length to the railways of the province. With the Intercolonial Ry., 467 miles, and the Dominion Atlantic Ry., 231 miles, the report does not deal, but it covers the following lines which come under the jurisdiction of the Government of Nova Scotia: Cumberland Ry. and Coal Co., 32 miles; Cape Breton Ry., 31 miles; Canada Coal and Ry. Co., 12 miles; Inverness Ry. and Coal Co., 61 miles; Midland Ry., 58 miles; Sydney and Louisburg Ry., 39 miles; Nova Scotia Steel and Coal Co.'s Ry., 12 miles; Halifax and South-Western Ry —Halifax to Yarmouth, 247 miles; Bridgewater to Middleton, 55 miles; Mahone to Lunenburg, 7 miles; Caledonia branch, 22 miles; Victoria Beach, 40 miles—371 miles. These eight railways have a total mileage of 616 miles, whereas ten years ago the five railways under the jurisdiction of the province had a total of 163 miles. The increase gives an average of 45 miles of railway constructed in the province under the subsidy act per year for the last ten years. While the railway construction throughout Canada has not kept pace with the growth of the population during the last ten years, railway construction in Nova Scotia had advanced much more rapidly than the population. In 1896 the railway mileage in Nova Scotia was 840 miles, or one mile to every 540 inhabitants, while at the present time there were 1,314 miles of line, or one mile to every 350 inhabitants. Now that the Halifax and South-Western Ry. has been completed, the only large portion of the province without railway accommodation is Guysboro and the eastern part of Halifax county, and during the year just closed a complete survey of a proposed road has been made jointly by the Government and a company for this section of the country. The returns for the year, with the exception of the Halifax and South-Western Ry., show no increase over those of the previous year, but as most of these are coal roads, and by far the most important of the coal roads is the Sydney and Louisburg Ry., and as no figures are given for the coal hauled for the Dominion Coal Co., this fact of a slight decrease is of no great significance. On the other hand, while the Halifax and South-Western Ry. returns cannot very well be compared with 1904-05 on account of the much greater portion of the line being in operation, the returns are most gratifying, and the traffic so far is turning out equal to what its most sanguine advocates expected. The returns show on an average no increase in the receipts per train mile, and as a rule a perceptible decrease in the expenditure per train mile. On the Halifax and South-Western Ry. the expenditure has been reduced from $1.37 to $1.13, and on the Sydney and Louisburg Ry. from $1.88 to $1.75 per train mile. Until recently the question of oversight of the operation of railways was a very unimportant part of the Department's work, owing to the fact that the railway mileage was small, and the few subsidized railways being mostly short lines for the carrying of coal, the carrying of passengers being of secondary importance. With the rapid growth of mileage, and with large systems like the Halifax and South-Western Ry., where the principal traffic is passengers, and trains will be more frequent and much faster, the importance of the subject increases. It will be necessary to make some changes in the Railway Act to make it more practicable to deal with the question of returns and investigations of accidents, freight rates, etc. While the present act was being carried out as far as possible, it was difficult in some cases to get returns, due to carelessness and a tendency to resent any interference by the Government in such matters.

During the year eight passengers were killed, and 19 persons were injured on lines in the province. While, therefore, the freedom from accidents to passengers is a matter for congratulation, it must be remembered that most of the lines in Nova Scotia carry but few passengers. The returns show one person killed to every 77 miles of railway, and one person injured to every 32 miles of railway. While this compared very favorably with the rest of Canada, an improvement was hoped for. One-half of the accidents were caused by collisions, and one collision alone was responsible for a large proportion of the injuries.

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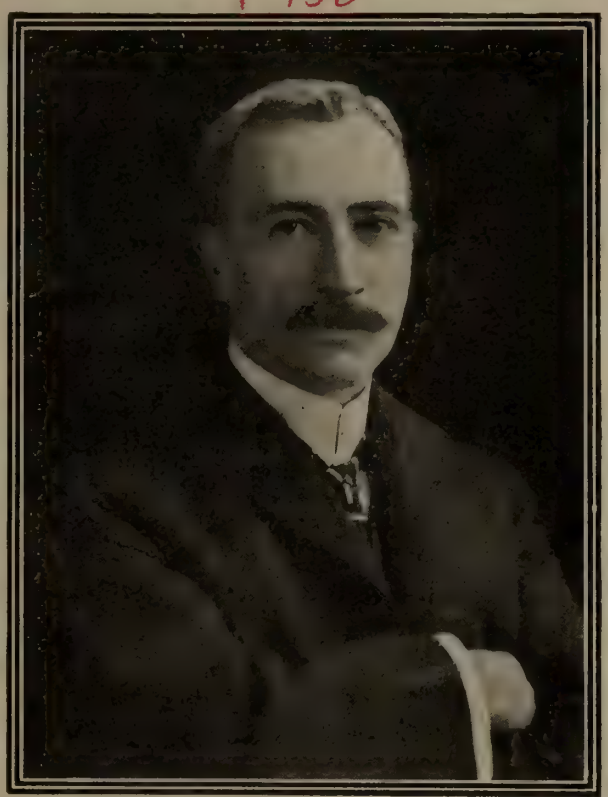

M. H. McLEOD,
Chief Engineer Canadian Northern Railway.

Dominion Atlantic Railway Meeting.

The annual meeting of shareholders was held in London, Eng., recently, C. F. Kemp, President, in the chair. The report of the directors for the year 1906 showed that the receipts were £250,798, as against £220,250 for 1905, while the expenses were £192,720, against £178,168, so that the net revenue was £58,077, against £42,082. Including £345 brought down, the available balance was £58,422, against which £44,313 is chargeable for interest. Of the balance of £14,109 it is proposed to place £9,000 to the suspense account, and £2,000 is set aside in respect of the Boston service extraordinary expenditure, closing that account, leaving £3,109 to the credit of net revenue, which is to be carried forward. The temporary loans have been reduced from £167,718 to £117,560.

The President in moving the adoption of the report pointed out that while the receipts had increased during the year by no less than £30,548, that included a full year's working of the company's new Midland Division, which was taken over in Oct., 1905. Expenditure had increased by £14,552 in comparison with 1905. The expenditure of 1905 was itself heavier than usual, owing to the tremendous snow blockades of that year. The profit for 1906 showed an increase of £15,995, but, in view of the exceptional experiences of 1905, the directors had decided to place to depreciation account £9,000, and, further, they proposed to close the Boston service extraordinary expenditure account, which had been opened on instituting that service, by the setting aside of an additional £2,000. The balance of £3,109, remaining at the credit of net revenue, would be carried forward. He had to remind the proprietors that the labor question of their territory, as elsewhere in Canada, was a difficult one, and wages were all "on the rise." The development of the Midland Division of

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GUARANTEE COST per thousand miles for from one to five years, when conditions warrant it.

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Is pure water white in color; high fire test; low cold test, and splendid gravity.

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CHARLES MILLER,

PRESIDENT.

their property, a new line through a new country, offers very fine expectations for the future. As regards freight, the directors are doing all they can to assist in the country's mineral development, and, to that end, for the prosecution of mining in the South Mountain, the company has constructed an extension of 1½ miles of the Torbrook branch. This mining industry is more or less in its infancy. At Truro, their new terminus, they had a valuable connection with the Intercolonial Ry. While their own line ran from Halifax to Yarmouth, via Windsor and Annapolis, on the northern shore of the Province, the Halifax and South-Western Ry. had been opened along the south shore, and they trusted that this new line, developing more or less a country hitherto difficult of access, would contribute to Dominion Atlantic Ry. business. The financial position of the company was very strong, and during the year they reduced their indebtedness by £50,000. In addition, they had sold to advantage one of their ships, which was of comparatively little value to them. The resolution was seconded by T. R. Ronald, Vice-President, and adopted.

P. Gifkins, General Manager, stated that the development of traffic in 1906 was encouraging, the prospects for the future were good, and he thought they might look for an increase of business on the Midland Division. The railway had been maintained in thoroughly good conditions.

Recent Dominion Legislation.

The following acts respecting transportation interests were passed at the recent session of the Dominion Parliament in addition to those enumerated in our May issue:

Abitibi and Hudson Bay Ry.—Act of incorporation.

Alberta Central Ry.—Respecting the powers of the company.

Algoma Central and Hudson Bay Ry.—Respecting the powers of the company.

Atlantic, Quebec and Western Ry.—Extending the time for construction.

Bonaventure and Gaspe Telephone Co.—Act of incorporation.

Burrard, Westminster Boundary Ry. and Navigation Co.—Act of incorporation.

Canada Shipping Act.—Amending the act respecting the shipping of seamen.

Canada Shipping Act.—Amending the provision with regard to the punishment of certain offences.

Canadian Northern Ontario Ry.—Extending the time for construction, and authorizing the construction of additional lines.

Canadian Northern Quebec Ry.—Respecting the powers of the company.

Canadian Northern Ry.—Amending the acts relating to the company's bonding powers, etc.

Collingwood Southern Ry.—Act of incorporation.

Crawford Bay and St. Marys Ry.—Amending the act of incorporation.

Grand Trunk Ry.—Granting power to provide a pension fund for employes.

Grand Valley Ry.—Amending the act of incorporation and subsequent acts.

Klondike Mines Ry.—Respecting the powers of the company.

Manitoba Radial Ry.—Act of incorporation.

Manitoulin and North Shore Ry.—Extending the time for construction.

Midway and Vernon Ry.—Amending the company's acts.

Montreal Harbor Commissioners.—Providing for further advances for harbor improvement works.

Nipissing Central Ry.—Act of incorporation.

Ontario, Hudson's Bay and Western Ry.—Extending the time for construction.

Ottawa Terminals Ry.—Act of incorporation.

Quebec Bridge and Ry. Co.—Authorizing a loan to the company.

Quebec Harbor Commissioners.—Increasing the borrowing powers of the Commission.

Quebec Oriental Ry.—Amending the acts relating to the company.

Railway Act.—Two acts to amend the Railway Act, 1903.

Railway subsidies.—Authorizing the granting of subsidies in aid of the construction of certain railways.

St. Lawrence and Quebec Ry. Ferry Co.—Act of incorporation.

St. Leon Ry.—Act of incorporation.

St. Mary River Bridge Co.—Extending the company's powers.

St. Maurice Valley Ry.—Amending the company's acts.

Winnipeg and North-Western Ry.—Act of incorporation.

Winnipeg Terminals.—Confirming an agreement respecting the Winnipeg terminals of the Canadian Northern Ry. and the G.T. Pacific Ry.

Train Lighting and Heating.

The Secretary of the Board of Railway Commissioners has issued the following circular to all railway companies under the Board's jurisdiction:

"In accordance with the direction of the Board, I give below copy of report of J. Ogilvie, Inspector of Railway Equipment and Safety Appliances to the Board, dated April 15, in connection with recent accidents in Canada where a number of lives were lost through wrecks being set on fire from cooking lamps or stoves in the coaches which were derailed.

"Recommendation of Inspector of Railway Equipment and Safety Appliances:

"'1. That, say within two months from date, all passenger coaches be equipped with two fire extinguishers, each similar to those manufactured by the Stempfel Co., or others of equal efficiency. All such fire extinguishers to be tested and recharged every three months.

"'2. That an order be issued to railway companies prohibiting the use of fires in all passenger coaches, other than fires which it may be necessary to have in the cars for heating purposes, such fires to be lit only in cases of emergency which may occur from breakdown of the motive power or the bursting of any of the small pipe connections between the engine and the cars, or from any other cause which may make the heating apparatus ineffective for a time.

"'Heaters for the purpose of heating cars with fire to be absolutely fire-proof, so that in case of a derailment or damages from wrecks, it will be almost impossible for such heating arrangement to set fire to the cars.

"'That all stoves for the use of cooking or heating purposes in colonist cars be forthwith dispensed with. Steam heating arrangements for boiling water for making tea or coffee, or for boiling eggs can be provided instead of stoves, with the exception of the cooking ranges in the dining-cars, as there is not the same liability from fire in the cooking ranges in dining-cars as there is in cooking stoves or ranges in colonist cars, owing to the fact that the dining-car is, as a general rule, placed in the part of the trains least exposed to danger.

"'I would also like to call attention to the fact that I consider the use of gas of any description in passenger coaches for the purpose of lighting such coaches, a menace to the life of the passengers in all cases of derailment or wrecked passenger trains; and I would strongly recommend the lighting of our passenger trains by a combination of electricity and oil lamps, the latter to be used only in case of serious defects or breakdowns in the electrical appliances. It seems to me that from the vast improvements that have been made in the last year or two, in the power of small engines, that baggage cars can readily be fitted with engines and electrical equipment to generate the electricity necessary for lighting of passenger trains while on the road.'

"I am further directed to ask that you inform the Board what time could reasonably be allowed for making the changes recommended by its Inspector, if the same should be adopted by the Board."

Delaware and Hudson Company.

The 77th annual report of the directors covers the operations of the company for the year 1906. After referring to the company's U.S. railways the report proceeds: Through stock ownership this company has acquired control of the Quebec, Montreal and Southern Ry. The road of the latter company extends from Noyan Jct. to St. Robert's Jct. upon the line which will be started immediately, and from St. Lambert to Pierreville. Its total mileage of constructed road is 145 miles. In connection therewith will be acquired the Napierville Jct. Ry. Co. extending from Rouse's Point to St. Constant, 27 miles. Negotiations are substantially completed for running rights from St. Constant to St. Lambert, opposite Montreal, and across the river into Montreal with the use of terminal facilities in that city, and also for running rights from Rouse's Point to Noyan Jct., where the existing line of the Quebec, Montreal and Southern Ry. begins, making the total distance covered by these running rights 16 miles. It is contemplated during the present year to extend the road easterly in the direction of Quebec, a distance of 48.5 miles, and when the Quebec Bridge is completed, the road will be further extended 43.5 miles to it. With these additions, the road will have a mileage of 263.5 miles with running rights on 16 miles, making 279.5 miles in all. Its maximum gradient will be 16 ft. to the mile, and its maximum curvature 1.3°. It will be the shortest line between Quebec and New York, between Montreal and New York, and between Quebec and Montreal. It will give this company's lines direct connections with all the important railways in eastern Canada, and will enable this company to efficiently serve the numerous paper mills located upon its lines with the supply of pulpwood necessary for their operation. Following are figures dealing with the company's railways and mines:

Gross earnings	$36,669,235.41	
Gross expenses and txs.	28,337,957.58	
Net earnings		$8,331,277.83
Interest and rentals		3,175,140.26
Net income for the year after all charges, being 12.28% on the capital stock ($42,000,000), was		$5,156,137.57

The total amount of anthracite coal produced by the company during the year was 5,401,389 tons, and the stock on hand Dec. 31, was 136,864 tons.

The condensed balance sheet showed assets of $75,736,646.95, against liabilities of $68,253,365.03. On the asset side there were decreases of $4,209,050.92; increases of liabilities of $13,776,331.25, and increase of profit and loss of $493,801.25, making altogether $18,479,183.42 to be accounted for by increases in assets of $16,407,726.55, and decreases of liabilities of $2,071,456.87. Among the increases of assets is the Quebec, Montreal and Southern Ry., carried at $810,356.30. The amount paid on account of the line to Dec. 31, 1906, was $1,810,356.30, of which $1,000,000 is represented by a temporary loan, leaving net value as an asset of $810,356.30. The stocks owned are valued at $23,162,650.16, of which $1,000,000 is represented by 10,000 shares of Q., M. and S. Ry. stock.

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Prompt Unloading of Cars.

F. K. Lane, of the Interstate Commerce Commission, has written the chairman of the American Railway Clearing House, Chicago, as follows: "It is our desire to see everything done that is practical to stimulate the movement of equipment. We have found throughout the country that by reason of competition railroads have been bidding against each other for business by the granting of free time. Instances of this kind arose at our hearings in Chicago upon the general subject of car shortage, where the shippers confessed that they did not need the time that was granted them, and were willing to have it reduced from five to two days. Nothing can be added to the view expressed in the report on car shortage made by Commissioner Harlan and myself, and it remains the holding of the Commission that every effort put forth by the railroads to stop the using of cars as warehouses and limit their use to purely railroad purposes will have our cordial co-operation. Shippers must have a reasonable and not an excessive time to unload, and I think that most of the shippers realize that it is a part of good citizenship at a time such as this to release equipment speedily in the interest of the general business of the country."

G.T.R. SEMI-ANNUAL MEETING.

At the semi-annual meeting in London, Eng., recently, the directors' report for the half-year ended Dec. 31, was presented.

The following summary shows a comparison of the half-year's revenue account with that of the corresponding half-year, ended Dec. 31, 1905:

Dec. 31, 1905.		Dec. 31, 1906.
£3,288,993	Gross receipts	£3,584,846 19 11
	Deduct—	
2,345,716	Working expenses, being at the rate of 71.45% as compared with 71.32% in 1905.	2,561,496 11 4
£ 943,277	Net traffic receipts	£ 1,023,350 8 7
	Add—	
16,013	Amount received from International Bridge Co.	16,012 16 7
902	Interest on Toledo, Saginaw, and Muskegon bonds	1,323 2 3
6,507	Interest on Central Vermont Ry. bonds	6,506 14 3
61,856	Interest on securities of controlled lines and on St. Clair tunnel bonds acquired by the issue of G. T. 4% debenture stock	66,491 8 4
15,044	Balance of general interest account	42,440 10 2
£1,043,599	Net revenue receipts	£1,156,125 0 2

Following are the net revenue charges for the half-year, compared with the corresponding period:

Dec. 31, 1905.		Dec. 31, 1906.
£ 77,603	Rents (leased lines)	£ 77,603 0 9
488,746	Interest on debenture stocks and bonds of the Co	488,745 19 10
47,816	Interest on debenture stock and bonds of lines consolidated with the G.T. Co.	47,657 4 6
18,037	Canada Atlantic Ry. deficit.	34,263 3 11
£ 632,202		£ 648,269 9 0
17,381	*Deduct* — Detroit, Grand Haven, and Milwaukee surplus	15,609 15 0
£ 614,821		£ 632,659 14 0
428,778	Leaving a surplus of	523,465 6 2
£1,043,599		£1,156,125 0 2

Adding the balance of £16,077 1s. 7d. at the credit of net revenue account June 30, 1906, to the above surplus for the past half-year, the total amount available for dividend is £539,542 7s 9d., from which the directors recommend the payment of the following dividends, viz.:

Half-year's dividend on 4% guaranteed stock	£	162,741 9 4
Half-year's dividend on first preference stock		85,420 15 0
Half-year's dividend on second preference stock		63,210 0 4
Half-year's dividend of 3% on third preference stock		214,939 1 6
	£	526,311 6 2

leaving a balance of £13,231 1s. 7d. to be carried forward to next half-year's account.

Following is a comparison of the receipts for the half-years ending Dec. 31, 1906 and 1905:

TRAFFIC STATISTICS.

Description of receipts.	1906.	1905.	Increase.	Decrease.
	£	£	£	£
Passengers	1,120,305	1,023,981	96,324	....
Mails and express	172,504	161,616	10,888	....
Freight and live stock	2,214,744	2,027,180	187,564	....
Miscellaneous	77,294	76,216	1,078	....
	£3,584,847	£3,288,993	£295,854	....
Passengers carried	6,046,070	5,755,671	290,399	....
Average fare per passenger	3s.8¼d.	3s.6¾d.	1¼d.	....
Tons of freight and live stock	8,318,075	7,579,878	738,197	....
Average rate per ton	5s.4d.	5s.4¼d.	....	¼d.
Tons carried one mile	1,598,546,752	1,393,513,496	205,033,256	....
Earnings per train mile	86.52d.	81.60d.	4.92d.	....

The average rate per ton per mile on the entire freight business was 0.67 of a cent, compared with 0.71 of a cent in the corresponding half-year.

The working expenses, excluding taxes, amounted in the half-year to £2,489,611, or 69.45% of the gross receipts, as compared with £2,294,201, or 69.75% in the corresponding half-year; an increase in amount of £195,410, but a decrease in the proportion to the gross receipts of 0.30%.

Following is a comparison of the revenue expenditure, including taxes, for the half-years ended Dec. 31, 1906 and 1905:

The train mileage of the half-year compares with that for the half-year ended Dec. 31, 1905, as follows:

Description of expenditure.	1906.	1905.	Increase.	Decrease.
	£	£	£	£
Maintenance of way, and structures	513,674	625,060	....	111,386
Maintenance of equipment	694,215	476,790	217,425	....
Conducting transportation	1,209,739	1,123,155	86,584	....
General expenses	71,983	69,196	2,787	....
Taxes	71,885	51,515	20,370	....
Total	£2,561,496	£2,345,716	£215,780	....
Percentage of gross receipts	71.45	71.32	0.13	....
Expenditure per train-mile	61.82d.	58.19d.	3.62d.	....

Description of Mileage.	1906.	1905.	Increase.	Decrease.
Passenger	4,434,957	4,275,345	159,612	....
Freight	5,197,835	5,084,625	113,210	....
Mixed trains	310,848	314,196	....	3,348
Total	9,943,640	9,674,166	269,474	....

From the foregoing statements it will be observed that the G.T. gross receipts for the half-year show an increase of £295,854, or 9%; the working expenses, including taxes, an increase of £215,780, or 9.20%; and the train mileage an increase of 269,474, or 2.79%.

The total charges to the capital account for the half-year were £65,274 11s. 10d. Of this £190 10s. 2d. was discount and commission on 4% Guaranteed Stock issued during the half-year. The actual expenditure on capital account was: New works, £21,770 2s. 1d.; double track, £41,640 7s. 1d.; land purchased (balance), £1,673 12s. 6d.; total, £65,084 1s. 8d.

No additions to the rolling stock at the expense of capital were made during the half-year. Twenty 10-wheel passenger and 55 mogul freight engines and 49 box cars have been purchased and charged to revenue, in addition to 3 first-class, 5 baggage, and 3 flat cars, and 3 snow-ploughs built in the Company's shops. Thirty engines have been broken up or sold during the half-year.

The gross receipts of the Canada Atlantic Ry. for the half-year were £225,353, against £217,379 in 1905, and the working expenses were £197,513, against £161,575, leaving a net revenue balance of £27,840, against £55,804, a decrease of £27,964, compared with the corresponding period of 1905. The net revenue charges for the half-year were £62,103, so that there was a net revenue deficiency of £34,263. The number of passengers carried during the half-year was 262,366, against 237,608, an increase of 10.42%, and the passenger train receipts, including mails and express receipts, were £53,811, against £44,369, an increase of 21.28%. The quantity of freight moved was 831,410 tons, against 876,112 in 1905, a decrease of 5.10%; the receipts from freight traffic were £165,939, against £165,640.

The gross receipts of the G.T. Western Ry. for the half-year were £638,222, against £580,490 in 1905, and the working expenses were £537,112, against £477,568, leaving a net profit of £101,110, a decrease of £1,812, compared with the corresponding period of 1905. The net revenue charges for the half-year were £83,858, against £84,678, so that there was, on Dec. 31, a net revenue credit of £17,252, which is carried forward, as compared with £18,244 for the corresponding half-year of 1905. The number of passengers carried during the half-year was 928,026, against 876,296, an increase of 5.90%; and the passenger train receipts, including mails and express receipts, were £222,071, against £181,897, an increase of 22.09%. The quantity of freight moved during the half-year was 1,667,419 tons, against 1,569,898, an increase of 6.21%, and the receipts from this traffic were £415,560, against £397,874, an increase of 4.45%.

The gross receipts of the Detroit, Grand Haven, and Milwaukee Ry. for the half-year were £196,093, against £169,524 in 1905; the working expenses were £144,110, against £115,061, leaving a balance of £51,983, against £54,463, a decrease in net revenue of £2,480, compared with the corresponding half-year of 1905. The net revenue charges for the half-year were £36,373, against £37,081 in 1905, so that there was a net revenue surplus of £15,610, as compared with £17,382 for the corresponding period of 1905. The number of passengers carried during the half-year was 420,089, against 377,747, an increase of 11.21%; and the passenger receipts, including mails and express receipts, were £67,678, against £62,669, an increase of 7.99%. The quantity of freight moved was 821,097 tons, against 706,448 in 1905, an increase of 16.23%; and the receipts from freight traffic were £124,386, against £103,616 in 1905, an increase of 20.05%.

Construction operations on the line of the G.T. Pacific Ry. have been necessarily almost completely suspended during the winter months. In the meantime, rails, ties, and construction material of all kinds have been collected at convenient points, with a view to having everything in readiness to actively renew operations as early in the coming season as the weather will permit. The work of con-

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struction was somewhat delayed during the past season, owing to the scarcity of labor, but strenuous efforts are being made to obtain an additional supply from Europe, and there is every prospect that there will be considerable immigration during the next few months of the class of labor required for railway construction. The Lake Superior Branch will be completed during the year to the point of junction with the main line. It is feared, however, that the section of the railway between the junction and Winnipeg, which is being constructed by the Government, will not be in a sufficiently forward state to connect the Lake Superior Branch with Winnipeg this year.

The retiring Directors are A. Hubbard, Sir Henry M. Jackson, Bart.; Hon. N. C. Roths child, and Lord Welby, all of whom are eligible and offer themselves for re-election. H. C. Newton, one of the auditors in London, and W. M. Ramsay, one of the auditors in Canada, also retire and offer themselves for re-election.

REPORTS OF OFFICIALS.

The Chief Engineer, J. Hobson, states that the length of the G.T.R. maintained and operated during 1906 was the same as for 1905, viz., 3,535 miles. A new second track is in course of construction between Lynden and Brantford, Ont., to accommodate the increased traffic between Lynden and Paris, via Brantford, Ont. At London, a new double-track bridge is being erected across the River Thames, at the Cove, where other improvements are being carried out in connection with the double-tracking of the line between London and Hyde Park. The expenditure during 1906, on the permanent way and structures, was $3,899,881.83, as against $4,349,459.13 in 1905. The outlay on the track and permanent way, together with repairs of roadway, ballast and ballasting, clearing snow, renewals of rails and ties, including their proportion of the cost of superintendence was $2,598,904.11 in 1905, or at the rate of $735.19 per mile; in 1906, the amount was $2,899,532.42, or at the rate of $820.24 per mile, an increase of about 11½%, caused principally by the large quantity of steel rails laid in main line tracks during the year 1906. New stations have been built at Brompton-ville, Compton, Lisle, Creemore, New Hamburg, Lucan, Ailsa Craig, Burlington Junction, Onondaga, Paris, Walkerton, Southampton, Aylmer, Jarvis, and Fort Erie. The materials used for renewals and repairs of main tracks and sidings were:

New steel rails laid in track	28,943 tons
Re-rolled steel rails laid in track	14,265 "
Partially-worn steel rails laid in branch lines and sidings	13,327 "
New ties placed in track	1,157,695
Ballast (cubic yards)	442,115

The Superintendent of Motive Power, W. D. Robb, reports expenditure, mileage, etc., as follows:

Half-year ended.	Total Expenditure.	Train Mileage.	Rate of Expenses per Mile. Train	Engine	Car.
			Cents	Cents	Cents
Dec. 1906...	$4,574,141	9,943,640	46.00	35.43	2.95
Dec. 1905..	3,967,857	9,674,166	41.02	31.96	2.54

An increase in expenditure of $606,284.00, or 15.28%, compared with an increase in train miles of 269,474, or 2.79%.

	Passenger Trains	Freight Trains	Mixed Trains.
The average number of cars moved per train was.....	4.8	25.2	7.9
And for the corresponding period.....	4.6	26.4	8.0

During the half-year 30 engines have been scrapped or sold. Of the latter 18 were purpurchased by the G.T. Western Ry. and three by the G.T. Pacific Ry.

The comparative cost of repairs per train, engine and car mile was:

Cost per Mile.	Repairs and Renewals of Locomotives. 1906.	1905.	All repairing charges including shop, machinery, tools, and marine equipment, etc. 1906.	1905.
	Cents.	Cents.	Cents.	Cents.
Train	15.17	11.05	17.32	13.31
Engine	11.69	8.61	13.34	10.37
Car	0.97	0.67	1.11	0.82

The Superintendent of Car Department, W. McWood, reports expenditure, mileage, etc., as follows:

Half-year ended.	Total Cost of Repairs and Renewals.	Total Miles run by Cars. Passenger.	Freight.	Total.	Cost per Mile. Car.	Train.
					Cents.	Cents.
Dec., 1906.	$1,655,835	21,968,838	132,975,561	154,944,399	1.069	16.65
" 1905.	1,033,148	20,595,259	135,850,006	156,445,265	0.660	10.68

An increase in expenditure of $622,687, or 60.27%; with a decrease in car miles of 1,500,866, or 0.96%.

Three first-class, 5 baggage and 3 flat cars, also 3 snow-ploughs and 2 rapid unloaders were built new in company's works at cost of revenue. In addition, 49 box cars were purchased and charged to revenue.

The revenue account for the half-year follows:

RECEIPTS.

	£ s. d.	£ s. d.
Passengers		1,128,280 17 4
Less—International bridge tolls	1,485 16 0	
St. Clair tunnel tolls	6,490 1 4	
		7,975 17 4
		1,120,305 0 0
Mails and express		172,504 9 10
Freight and live stock		2,314,235 0 3
Less—		
Cartage, etc.	64,823 3 7	
International bridge tolls	11,213 14 8	
St. Clair tunnel tolls	23,454 11 2	
		99,491 9 5
		2,214,743 10 10
Miscellaneous receipts, rents, tolls, etc.		77,293 19 3
		£3,584,846 19 11

EXPENDITURE, JUNE 30, 1906

		£ s. d.
Maintenance of way and structures	14.33%	513,674 7 0
Maintenance of equipment	19.37%	694,215 10 2
Conducting transportation	33.74%	1,209,738 15 5
General expenses	2.01%	71,982 17 11
Total working expenses	69.45%	2,489,611 10 6
Taxes	2.00%	71,885 0 10
	71.45%	2,561,496 11 4
Balance to net revenue account		1,023,350 8 7
		£3,584,846 19 11

The President said the half-year under review had been uneventful but satisfactory. The company had earned the largest income recorded in any half-year, and for the first time was in a position to distribute 3% to the third preference shareholders. The gross receipts were £3,584,847, against £3,288,993 in the Dec. half-year of 1905, an increase of as nearly as possible 9%, and that increase is spread over all our branches of revenue—passengers, freight, and miscellaneous. The number of tons of freight and live stock moved increased from 7,579,878 tons in the half-year ended Dec., 1905, to 8,318,075 tons in the past half-year, an increase of about 9¾%. The number of passengers carried increased from 5,755,671 in the Dec. half-year of 1905 to 6,046,070 in the past half-year, an improvement of a little over 5%. Some misapprehension seems to have been caused owing to an announcement that the Railway Commissioners had made an order fixing the maximum rate for passengers per mile in the case of railways east of the Rocky Mountains at 3c. a mile. An impression seems to have been created in some quarters that this arrangement would be detrimental to the interests of the company and prejudicial to the revenue. But that is not the case. As a matter of fact, rates charged in Ontario and Quebec are not—except in some very unimportant particulars—in excess of 3c. a mile. As a general rule they are below that amount, and therefore the effect upon the G.T.R.—certainly at present—will be practically nothing. As regards the effect it may have upon the G.T.P. Ry., when that line comes into operation—well, for a considerable time to come, certainly, the profit will be derived from the movement of freight, and as regards the passenger traffic there is not much loss to be apprehended in that direction, seeing that for some time to come the company's principal business will be that of introducing immigrants into the country.

The total revenue expenditure showed an increase of £215,780 and the proportion to the gross receipts was 71.45%, compared with 71.32% in 1905. This increase was entirely due to increased taxation, the expenses of maintenance and operation, although showing an increase in amount of £195,410, being 0.30% less in the percentage proportion to receipts. The decrease in the expenditure under the head of maintenance of way and structures, £111,386, was due to a considerable extent to the special expenditure made during the eight years ended Dec., 1905, for the renewal of bridges. The amount at the credit of the renewal of bridges account is £52,796, which is estimated to be sufficient to complete the bridges covered by the original program, after which the charges for bridge renewals will become of a normal character. Fifteen new stations were erected during the year; there were small reductions in the cost of ballasting and ties, and increases in the cost of repairs of roadway due to increased wages, and increased mileage of new rails laid. The taxes paid showed an increase of £20,370, or practically 40%. He could only repeat that this was a matter over which the directors had no control, however much they might deplore the tendency of the Canadian legislatures to put increased burdens upon the railways. The G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry. continue to give very satisfactory results. In each case the fixed charges have been met and a substantial surplus has remained over. The Canada Atlantic Ry. still lagged behind, but the present deficiency was accounted for by the amounts being expended in working its condition up to the standard of the main line.

Referring to the G.T. Pacific Ry. the President said: "On the Lake Superior branch, the work is well advanced, and there is no doubt it will be completed in the course of the present summer. Going westward from Winnipeg, work is progressing speedily between that city and Edmonton—a distance

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of 790 miles—and there is no doubt that that portion of the road will be completed this year, but possibly not quite so soon as we expected, in consequence of the scarcity of labor, but that we shall get through to Edmonton some time this year I have little doubt. The delay of the Government contractors in completing their portion between Winnipeg and Lake Superior Jct. may somewhat postpone the obtaining of a junction with our road. When navigation is open the grain and other freight will be brought down to Fort William and be taken across the lake to our numerous ports on Georgian Bay, and there connect with our road. After the close of navigation the freight will go by the main road, which you will see on the map, running direct from Winnipeg in the direction of Quebec. In order to obtain access to the G.T.R., a branch will be built connecting the transcontinental road with North Bay. We must establish a branch running from North Bay, which is the northernmost point of our system. Surveys have been completed for the construction of that road, which is about 245 miles; but it is unnecessary to take the work in hand until the Governme[illegible] is more advanced with their work across [illegible]. Contracts have been let for const[illegible]est of Quebec, but so far no work has [illegible]ommenced beyond about 150 miles i[illegible]diately to the west of Quebec. Beyond Edmonton, surveys have been made, and a great portion of the road is already located, and construction will be taken in hand as soon as possible, but this matter is less urgent than the completion of the road east of Edmonton. The important points on the road of the Grand Trunk Pacific at present are Fort William, Winnipeg, Edmonton, and Prince Rupert. Work is going on actively at Fort William in constructing the necessary buildings, and so forth, and making the harbor, and a vast quantity of material has already been accumulated there for the construction of the railway. The same thing applies further on at Portage la Prairie, about 40 or 50 miles west of Winnipeg, which is a great centre for the concentration of material. At Winnipeg a satisfactory arrangement has been made with the Canadian Northern Ry. to share with them the very extensive terminal accommodation. The Canadian Northern Ry. had obtained possession of what is probably the most eligible site for railway accommodation in Winnipeg. We have arranged with them to have a union station, and connected with that there will be extensive yards, and also a large hotel. The work will be taken in hand as soon as possible and will place us, when completed, in a very favorable position. As regards Edmonton, nothing has been concluded yet as to terminals, but we have received a bonus from the city of $100,000, and also exemption from taxation for a certain number of years. Not the least important point is our new port, Prince Rupert, which is the termination of the road. Undoubtedly some of these days it will acquire an importance equal to any of the other ports on the Pacific side. We have acquired there a tract of 24,000 acres of land. We shall not hold all that ourselves, for we shall dispose of what we do not want for our own purposes on advantageous terms. That gives you a general idea of what is being done. In the meantime, the G. T. Pacific Ry. directors and managers have not been behindhand with the ordering of the necessary equipment, 2,650 cars had been delivered at the end of last year, and a further large number have been contracted for. We were hopeful that we should be able to carry a certain amount of the harvest this year between Edmonton and Winnipeg eastward, but owing to the delay on the part of the Government contractors, I am not so hopeful as I was. What the prospects of the harvest may be for this year, it is impossible to say at present, but so far the conditions are not otherwise than favorable, but whether the harvest is better or worse than the bountiful ones which we have had during the last few years, it is satisfactory to know that according to estimates about 20% more grain land will come under cultivation this year than last year, so that even if the harvest is less plentiful than it was last year, and there should be any falling off in the average yield, the deficiency will probably be made up by the increased acreage under cultivation. As you are aware, the flood of immigrants is still flowing into the country. All through the winter, even in the worst and severest months, we have had news of train loads of immigrants being deposited at points all along the road. At June 30 last, no less than 3,071 miles of railway were under construction in the country, and something like 5,000 miles of new railway are under contract during the present year.

It has become an absolute necessity for our company to fall into line with its competitors, and, accordingly, we have obtained powers from Parliament for the creation of a pension fund, the contributions to which will form part of the company's working expenses. The matter is now under the consideration of the Board, so I am not in a position to-day to tell you precisely what the charge upon the revenues of the company will be; but a preliminary examination by our officers in Canada points to a contribution of something like $70,000 or $80,000 a year. A Superannuation and Provident Association does exist for the benefit of a limited number of officers on the G.T.R., to which the company has been in the habit of contributing an amount equal to that paid by the officers. The amount so paid last year was about $26,000, but this association will gradually disappear as the lives of the present subscribers fall in.

In February last we made a first issue of 4% debenture stock of the G.T. Pacific Ry. guaranteed by the G.T.R. Co., practically at par. You will have observed, during the recent troublous times in the city, the remarkable steadiness of G.T.R. securities.

In conclusion he moved the adoption of the report and the declaration of the following dividends: To the holders of the 4% guaranteed stock of £2%; to the holders of the first preference stock of £2 10s. %; to the holders of the second preference stock of £2 10s. %; to the holders of the third preference stock of £3%. The resolution was seconded by A. W. Smithers, and passed.

The retiring directors Lord Welby, Hon. N. C. Rothschild, Sir H. M. Jackson, and A. Hubbard were re-elected; as also were H. C. Newton, and W. M. Ramsay, one of the English and one of the Canadian auditors.

The annual convention of the International Brotherhood of Locomotive Engineers will be held at Ottawa, June 17 to 22. It is expected that there will be about 3,000 delegates and their friends in attendance.

The following freight tariffs have been filed with the Board of Railway Commissioners: Local freight mileage tariff, St. Maurice Valley Ry., (operated by the C.P.R.); Supplement No. 2 to W. No. 50, Supplement No. 2 to C.R.C. No. W. 2, C.P.R. Western Lines; Supplement No. 2, to W. No. 56, Supplement No. 2, to C.R.C. No. W. 3; Supplement No. 1, to W. 168, Supplement No. 1, to C.R.C. No. W. 7.

Judgment has been given by the Ontario courts in favor of T. Wallace for $13,717.50, with costs and interest, for ties supplied in 1904 to the Temiskaming and Northern Ontario Ry. The ties were supplied and passed prior to the change in the Commission in 1905, but on a re-inspection the Chief Engineer was directed to withhold his certificate for ties supplied in Mar., 1905. The recent case was a re-trial, on a direction from the Supreme Court.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,900	324,200	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	13,800−
Jan..	351,400	410,300	58,900 −	158,200
Feb.	333,200	363,600	30,400 −	113,900 −
Mar.	488,800	394,800	94,000 −	23,400 −
	$5,089,500	$3,767,200	$1,322,300	$ 32,200+

Approximate earnings for April, $569,900, against $544,800, for April, 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug. 6	170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept. 6	152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct.. 6	946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov. 6	234,583.28	3,971,460.34	2,263,122 94	98,188.05 −
Dec. 5	992,098.07	3,726,503.73	2,265,594.34	80,988 97 −
Jan. 4	205,527.07	3,657,199.46	548,327.61	718,906.41 −
Feb. 4	268 206.74	3,646,218.62	621,988.12	583,755.66 −
Mar. 6	132,910.76	3,887,174.54	2,245,736 22	401,071.72+
	$52,071,118.64	$34,069,199.99	$18,001,918.65	$1,496 877 25+

Approximate earnings for April, $6,308,000 against $5,462,000 for April, 1906.

Duluth, South Shore and Atlantic Ry.—Gross earnings for Mar., $260,836.37; net earnings, $66,056.25; against $252,308.82 gross and $77,522.40 net for Mar., 1906. Net earnings for nine months ended Mar. 31, $726,892.66 against $757,466.22 for same period, 1905-06. Approximate earnings for April, $277,557, against $240,045 for April, 1906.

Mineral Range Ry.—Approximate earnings for April, $67,760 against $54,514 for April, 1906.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—Gross earnings for Mar., $1,000,855.40; net earnings, $333,833.65, against $903,677.25 gross and $389,229.92 net for Mar., 1906. Net earnings for nine months ended Mar. 31, $3,970,655.99 against $4,563,805.61 for same period 1905-06. Approximate earnings for April, $1,137,171, against $946,323, for April, 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for Mar. as compared with Mar., 1906.

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$2,721,200	$2,479,845
Expenses	1,946,300	1,767,573
Net earnings	$ 774,900	$ 712,272

CANADA ATLANTIC RAILWAY.

Earnings	$ 145,400	$ 157,605
Expenses	137,400	120,771
Net earnings	$ 8,000	$ 36,834

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 544,500	$ 481,643
Expenses	445,100	388,139
Net earnings	$ 99,400	$ 93,504

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 160,000	$ 149,399
Expenses	126,700	122,496
Net earnings	$ 33,300	$ 26,903

Approximate earnings for April, $3,747,960, against $2,532,293 for April, 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to April 30.

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£2,111,216	£1,891,768	£219,448	...
Canada Atlantic	108,633	108,351	282	...
G. T. Western	397,105	346,786	50,319	....
D. G. H. & M.	116,316	107,966	8,350	....
Total.....	£2,733,270	£2,454,871	£278,399	....

The St. Maurice Valley Ry., which extends from Three Rivers to Shawinigan, Que., 20.85 miles, is being operated temporarily by the C.P.R. for the owners. The time table bears the signatures of V. Burrill, President and W. H. Potter Trainmaster.

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EXHIBIT IN BALL ROOM

ATLANTIC CITY CONVENTIONS

Orders by the Railway Commissioners.

2762. April 19.—Approving Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.'s standard freight tariff, C.R.C. 137.

2846. Mar. 7.—Authorizing Tillsonburg Electric Light Works to carry its wires over C.P.R. tracks at King St. and Tillson Ave., Tillsonburg, Ont.

2847. April 15.—Authorizing C.P.R. to construct an additional spur to Carney Lumber Co.'s premises, Owen Sound, Ont.

2848. April 16.—Authorizing G. A. Brown, Chief Clerk of Traffic Dept., to inquire into complaint of St. John Ice Co. against New Brunswick Southern Ry.

2849. April 13.—Authorizing C.P.R. to alter location of track at end of Bay St. and lay several additional tracks in Owen Sound, Ont.

2850. April 13.—Confirming order 1361, Aug. 9, 1906, authorizing C.P.R. to construct branch line to Carney Lumber Co.'s premises, Owen Sound, Ont.

2851. April 16.—Authorizing Canadian Northern Ontario Ry. to cross C.P.R. at Little Key River, Ont.

2852. April 15.—Extending time for installation of interlocking plant at Milton, Ont., by C.P.R. until May 31, 1907.

2853. April 17.—Approving location of Canadian Northern Ry., mileage 0-37.96 from junction with main line at Dalmeny, Sask.

2854. April 16.—Authorizing G.T. Pacific Ry. to cross Canadian Northern Ry. tracks at parish lot 58, Portage la Prairie, Man.

2855. April 15.—Authorizing Crow's Nest Pass Lumber Co., Ltd., to erect a blow pipe across C.P.R. right of way at Wardner, B.C.

2856. April 15.—Authorizing C.P.R. to construct a siding to Standard Wire Fence Co.'s premises, Woodstock, Ont.

2857. April 15.—Authorizing Norfolk County Telephone Co. to cross Michigan Central Rd. tracks at James St., Waterford, Ont.

2858. April 15.—Authorizing C.P.R. to construct a spur line to Pease Foundry Co.'s premises, Toronto, Ont.

2859. April 15.—Approving revised location of C.P.R. Pheasant Hills Branch, mileage 471.6 to 499.2.

2860. April 15.—Authorizing C.P.R. to construct line near Greenwood, B.C., from main line for about 271 ft.

2861. April 15.—Authorizing G.T.R. Co. to construct a branch line to Lehigh Portland Cement Co.'s premises, County of Hastings, Ont.

2862. April 15.—Approving Maritime Express Co.'s by-law authorizing W. Fraser to prepare and issue tariffs of tolls.

2863. April 9.—Authorizing Ontario Iron and Steel Co. to lay a gas pipe under the G.T.R. tracks, Crowland tp., Ont.

2864. April 15.—Authorizing C.P.R. to construct branch line to Finlayson & Sons, premises, Norwood, Ont.

2865. April 16.—Authorizing Canadian Northern Ontario Ry. to connect its tracks with Toronto and York Radial Ry. tracks at Richmond Hill, Ont.

2866. April 16.—Authorizing C.P.R. to construct a branch line to J. Gunn & Sons' premises, Rockspur, Man.

2867. April 17.—Authorizing G.T. Pacific Ry. to temporarily use for construction purposes the crossing with Canadian Northern Ry., Carberry branch, in section 1, tp. 12, range 15, w. 1st mer., Man.

2868. April 9.—Directing Canada Southern Ry. to provide a suitable farm crossing for J. A. Hicks, Glenrae, Ont.

2869. April 16.—Authorizing C.P.R. to construct a branch line to London Fence Co.'s premises, Portage la Prairie, Man.

2870. April 12.—Ordering telephone companies to file with the Board particulars of free or reduced rates granted by them: also particulars of cases where service is given wholly or partly for consideration other than monetary payments.

2871. April 18.—Authorizing G.T.R. to use and operate C.P.R. spur line at Union Stock Yards, Toronto, from point marked K to point marked D.

2872. April 22.—Authorizing Georgian Bay and Seaboard Ry. Co. to cross certain streets in Coldwater, Ont.

2873. April 22.—Approving proposed location of C.P.R. Moose Jaw Branch, mile 270.9 to 295 8.

2874. April 22.—Approving proposed revised location of C.P.R. Pheasant Hills Branch, mile 499.2 to 562.6.

2875. April 19.—Authorizing C.P.R. to construct branch line to Standard Explosives Co.'s premises, Ste. Jeanne de L'Isle Perrot, Que.

2876. April 22.—Approving proposed location of Niagara, St. Catharines and Toronto Ry., between Toronto and Humberstone.

2877. April 19.—Authorizing Cabano Water Works Co. to lay an iron pipe under the Temiscouata Ry. Co.'s tracks at Cabano, Que.

2878. April 23.—Approving Brantford and Hamilton Electric Ry. location from near Langford, Ont., to the crossing of the Stone Road, Cainsville, Ont.

2879. April 23.—Approving interlocking and derailing plant to be installed by C.P.R. at the drawbridge crossing Lachine Canal, near Highlands, Que.

2880. April 23.—Authorizing Bell Telephone Co. to cross Canadian Northern Ry. tracks at joint traffic and C.N.R. Bridge, Emerson, Man.

2881. April 23.—Authorizing Niagara, St. Catharines and Toronto Ry. to construct four branch lines in Thorold, Ont.

2882. April 23.—Approving Central Ontario Ry. location from a point near Bancroft, Ont., mileage 18½ to a point near Whitney, Ont., mileage 42.

2883. April 19.—Authorizing St Mary's and Western Ont. Ry. to join its tracks with the Tillsonburg, Lake Erie and Pacific Ry. tracks, near Embro, Ont.

2884. April 19.—Authorizing C.P.R. to construct branch line into McLaughlin Lumber Co.'s premises, Silverdale, B.C.

2885. April 2.—Approving Vancouver, Westminster and Yukon Ry. line from 14th to 20th streets, New Westminster, B.C.

2886. April 19.—Authorizing the G.T.R. to construct a branch line from lot 23, 1st con., Thurlow tp., Ont., to the Lehigh Portland Cement Co.'s premises, lot 25.

2887. April 18.—Authorizing Charney Council to carry the highway across the G.T.R. west of Chaudiere Curve station, Que.

2888. April 24.—Extending the time for filing and approval of express companies' tolls until July 1, 1907.

2889. May 15.—Authorizing Bell Telephone Co. to carry its wires across C.P.R. tracks near Chesterville, Ont.

2890. April 23.—Authorizing P. Galibert to carry a water pipe under C.P.R. tracks on the north-west branch of Lachine Canal.

2891. Feb. 8.—Authorizing Kaministikwia Power Co. to cross C.P.R. tracks opposite the Ogilvie Flour Mill Co.'s new mill and elevator, Fort William, Ont.

2892. April 17.—Authorizing Quebec, Montreal and Southern Ry. to put in a double span on the South River bridge, near Henryville, Que.

2893. April 24.—Extending time in order of Mar. 26. authorizing Windsor and Tecumseh Ry. to cross temporarily the G.T.R. tracks leading to the Ford Automobile Works and the Ontario Asphalt Co.'s premises, Sandwich East, Ont.

2894. Feb. 8.—Amending Order of Aug. 7, 1906, granting leave to Kamisistikwia Power Co. to erect wires across C.P.R. and C.N.R. tracks, West Fort William, Ont.

2895. April 25.—Approving proposed deviation of G.T.R. between St. Lambert stasion and Ste. Rosalie Jct., Que., excepting the portion between the west end of Belœil bridge and m.p. 24 east of St. Hilaire station.

2896. April 25.—Approving proposed deviation and grade improvements of the G.T.R. between west end of Belœil bridge and mileage 21.20 to 25.00 east of St. Hilaire station, Que.

2897, 2898, 2899 April 2.—Authorizing Vancouver, Westminster and Yukon Ry. to cross C.P.R. tracks near 14th St., on Columbia St., and at 10th St., New Westminster, B.C.

2900. April 26.—Approving G.T.R. standard passenger tariff C.R.C. E485 on basis of 3c. per mile between all stations in Canada.

2901. April 26.—Authorizing Calgary and Edmonton Ry. to construct a spur line of 500 ft. in Red Deer, Alta., to the Great West Lumber Co.'s premises.

2902. April 25.—Authorizing G.T.R. to construct a branch line from St. Patrick St. to east of Gowrie St., Fergus, Ont.

2903. April 26.—Authorizing Toronto, Niagara and Western Ry. to construct its line along Burlington Beach, Ont., on Beach Road.

2904. April 26.—Authorizing C.P.R. to construct a branch line in Calgary, Alta., along the C.P.R. right of way and across MacLeod St.

2905. April 26.—Authorizing the Michigan Central Rd. to construct a branch line across Wilson Ave., Malott St., Gordon Ave., Scratch St., Irwin Ave., or Station St., Essex, Ont.

2906. April 26.—Authorizing Bell Telephone Co. to carry its wires across Brandon, Saskatchewan and Hudson Bay Ry. tracks, between Rosser and Pacific avenues, Brandon, Man.

2907. April 29.—Extending time for use of crossing for construction purposes only by Windsor, Essex and Lake Shore Ry. over the Michigan Central Rd. at Talbot St., Essex, Ont.

2908. April 30.—Authorizing Grand Trunk Pacific Ry. to construct 5 sub-structures over North Saskatchewan River.

2909. April 30.—Authorizing G. T. Pacific Ry. to build seven sub-structures over South Saskatchewan River, near Saskatoon, Sask.

2910. April 24.—Approving Klondike Mines Ry. located line from Sulphur Springs to the divide between Dominion and Flat Creek, Yukon, 45 miles.

2911. April 30.—Authorizing Quebec Ry. Light and Power Co. to construct a branch line from its main line to the projected pulp mill on the River Ste. Anne, St. Joachim, Montmorency, Que.

2912. April 30.—Authorizing Toronto and York Radial Ry. to carry a copper wire cable under the C.P.R. tracks at Yonge St., North Toronto, Ont.

2913, 2914. April 30.—Authorizing North American Telegraph Co. to carry 20 telegraph and telephone wires across C.P.R.

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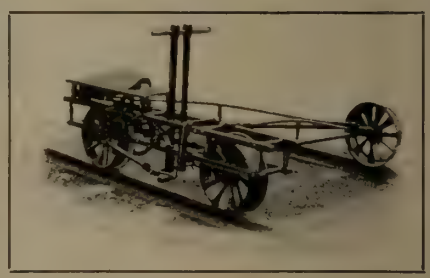

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tracks at Bogart's Crossing, 4 miles east of Tweed, and a similar number across the C.P.R. tracks at Black Creek Crossing, 2 miles east of Tweed, Ont.

2915. May 1.—Approving Brantford and Hamilton Electric Ry. location from Cainsville to the east limit of Brantford, Ont.

2916. May 1.—Authorizing C.P.R. to close public crossing and to open a new one in lieu on west side of Petite Riviere du Loup, near Louiseville, Que.

2917. May 1.—Authorizing W. K. Colbeck, of Grand Valley, Ont., to erect telephone wires across C.P.R. between townships of East and West Luther, Ont.

2918. April 30.—Authorizing the town of Oshawa, Ont., to construct Emma St. and Wilkinson Ave. over the Oshawa Ry. tracks.

2919. April 30.—Authorizing the G.T.R. to construct a branch line north of St. Etienne St., Montreal, to the Montreal Packing Co.'s premises.

2920. May 2.—Amending order of April 20, 1906, and authorizing the G.T.R. to divert Lake Shore Road, Hope tp., Ont.

2921. April 29.—Authorizing Niagara, St. Catharines and Toronto Ry. to carry its tracks over roads in Thorold tp. at 10 points.

2922. May 3.—Appointing J. Hardwell, Chief Traffic Officer, to make inquiry and report with respect to rolling stock, appliances, equipment, etc., on Canadian Northern Ry.

2923, 2924. May 7.—Authorizing Bell Telephone Co. to cross C.P.R. and G.T.R. tracks at Beaconsfield, Que.

2925-2930. April 30.—Authorizing North American Telegraph Company to carry 20 telegraph and telephone wires over C.P.R at various points.

2931-2949. April 30.—Approving proposed permanent work on 19 C.P.R. bridges on Quebec section.

2950. May 8.—Approving plans of substructure of railway at Lansdowne Ave., Toronto.

To United States Subscribers.

By the postal convention entered into recently between Canada and the United States, a very large increase has been made in the postage rate on periodicals passing from one country to the other. Heretofore the rate on periodicals mailed in Toronto, addressed to subscribers in the United States, has been a quarter of a cent a pound. On May 8 a rate of four cents a pound—an advance of 1,500%—went into effect. In common with other publishers, we have been compelled to advance our subscription rates to the United States to cover the additional cost of postage. To all subscribers who have paid in advance we shall supply THE RAILWAY AND MARINE WORLD up to the expiry of the current subscription without extra charge. To all others and to new subscribers in the United States the subscription price from June 1, 1906, will be $1.50 a year including postage, and all subscriptions must be paid strictly in advance.

After May 31 no dogs or other animals will be permitted in any steam railway car in the Eastern Canadian Passenger Association's territory, but will be carried only as baggage or express

The concordance to the Railway Act, as it appears in the Revised Statutes of Canada, 1906, chap. 37, compiled by J. E. W. Currier, of the Department of Railways and Canals, has been issued. A reference to the principal changes made in this new edition of the concordance was given in our Mar. issue.

June Birthdays.

Many happy returns of the day to—

Harry Abbott, President Vancouver and Lulu Island Ry., ex-General Superintendent C.P.R., Vancouver, B.C., born at Abbotsford, Que., June 14, 1829.

Jas. Anderson, Manager Sandwich, Windsor and Amherstburg Ry., Windsor, Ont., born at Ayr, Ont., June 20, 1851.

F. F. Backus, General Freight and Passenger Agent, Toronto, Hamilton and Buffalo Ry., Hamilton, Ont., born at Rochester, N.Y , June 4, 1860.

Archer Baker, European Manager C.P.R., London, Eng., born at York, Eng., June 21, 1845.

F. P. Brady, General Superintendent Lake Superior Division C.P.R., North Bay, Ont., born at Haverhill, N.H., June 22, 1853.

A. H. N. Bruce, C.E., Chief Engineer Napierville Jct., Ry., born at Ballyscullion, County Derry, Ireland, June 18, 1854.

E. Callaghan, Agent Hamilton Steamboat Co , Toronto, born at Kingston, Ont., June 17, 1875.

J. E. Dalrymple, General Freight Agent G.T.R., Montreal, born there, June 1, 1869.

W. H. Darcy, General Claims Agent C.P.R. Western Lines, Winnipeg, Man., born at Manorhamilton, Leitrim, Ireland, June 23, 1859.

A. E. Doucet, Division Engineer Transcontinental Ry. Surveys, Quebec, born at Montreal; June 9, 1860.

G. H. Eaton, Assistant Master Car Builder, C.P.R. Western Lines, Winnipeg, born in Staffordshire, Eng., June 9, 1860.

W. F. Fitch, President and General Manager Duluth, South Shore and Atlantic Ry. and Mineral Range Rd., Marquette, Mich., born at Circleville, Ohio, June 28, 1839.

A. A. Goodchild, Auditor of Stores and Mechanical Accounts C.P.R., Montreal, born at Peckham, London, Eng., June 3, 1866.

H. W. Harding, Local Secretary Canadian Northern Ry., London, Eng., born there June 6, 1869.

F. M. Hawley, city ticket agent G.T.R., Cobourg, Ont., born at Campbellford, Ont., June 22, 1874.

E. J. Hebert, General Agent C.P.R. Passenger Department, Montreal, born there June 18, 1864.

Carl Howe, Traffic Manager, Merchants Despatch Transportation Co., New York, born at Berrien Springs, Mich., June 11, 1870.

L. R. Johnson, Assistant Superintendent of Motive Power C.P.R. Eastern Lines, Montreal, born at Abingdon, Berks, Eng., June 22, 1855.

J. F. Jones, Superintendent St. Clair Tunnel G.T.R., Port Huron, Mich., born at Prairieville, Ill., June 4, 1851.

L. K Jones, Secretary Department of Railways and Canals, Ottawa, born at Port Hope, Ont., June 9, 1849.

A. C. Lytle, Superintendent and General Freight and Passenger Agent, Orford Mountain Ry., Eastman, Que., born at Hemmingford, Que., June 6, 1854.

W. R. MacInnes, Freight Traffic Manager C.P.R., Montreal, born at Hamilton, Ont., June 7, 1867.

E. H. McHenry, Fourth Vice-President New York, New Haven and Hartford Rd., and ex-Chief Engineer, C.P.R., born at Cincinnati, Ohio, June 25, 1859.

C. E. McPherson, General Passenger Agent C.P.R. Western Lines, Winnipeg, born at Chatham, Ont., June 7, 1861.

W. D. Matthews, director C.P.R., Toronto, born at Burford, Ont., June 22, 1850.

L. Mulkern, travelling freight agent, C.P.R., Toronto, born at London, Ont., June 18, 1871.

F. Price, Superintendent Car Service G.T.R., Montreal, born there June 11, 1864.

Jas. Stephenson, ex-Chief Superintendent G.T.R., Weston-Super-Mare, Somerset, Eng., born there June 2, 1837.

Quebec and Lake St. John Ry.

The directors' report presented at the annual meeting held in Quebec, May 10, contained the following:

The number of passengers carried during the year was 325,639, and the number of tons of freight 367,879. In the previous year the figures were 301,725 and 346,011. The freight consisted of the following number of car loads: cordwood, 1,124; pulpwood, 3,308; sawn lumber, 4,143; square timber, 560; ties, 812; pulp and paper, 1,427; brick, and stone, 259; cheese, 78; grain, 329; general merchandise, 5,914; total, 17,954.

The construction works on the branch line to La Tuque have been carried on by the contractor, J. Paquet, and by his sub-contractors, O'Brien & Fowler, with a large force of men during 1906, and also during the winter. The work has exceeded the estimates very largely, owing principally to a great deal of rock being found where test pits have led the engineers to expect earth and gravel Track is now laid to mile 30, and the grading thence to beyond mile 39 is almost completed, so that trains should be running to La Tuque not later than July next, and possibly earlier. The contractor is running regular trains to the end of the track, and the construction of the National Transcontinental Ry. having been commenced at La Tuque, men and material for this work are now being sent forward over the Q. & L. St. J. The water power at La Tuque has been purchased by a syndicate of U.S. paper mill manufacturers, who have also purchased from the company the land grant of 158,000 acres given by the Provincial Government to aid the construction of the branch to La Tuque The same purchasers have also acquired a large area of timber limits on the St. Maurice River, and have contracted to furnish the railway with not less than 4,000 carloads of freight annually for the next nine years. The branch line from Valcartier towards Gosford is being continued for a further distance of a mile, which will make the length of this branch 5½ miles. A considerable quantity of freight has been delivered at the end of the line, and only awaits the track to be brought to market. The branch line from Roberval to the Government Wharf on Lake St. John, a distance of about one mile, has been completed and was inspected by the Government engineers in Dec. last It is expected that this branch will be of great use in helping the steamboat navigation of Lake St. John, and thereby developing the territory on the north and west sides of the lake. The balance remaining unissued of the authorized issue of £500,000 of prior lien bonds has been disposed of during the past year, and has been and is being expended in the construction of the La Tuque, Gosford and Roberval Wharf branches, and also upon betterments on the main line. The ballasting of the main line from Lake Bouchette to Lake Edward was completed last year, and also a portion of the ballasting south of Lake Edward. Concrete and steel bridges have been constructed at the Rondeau and Jacot Rivers. The new dock at Quebec for the accommodation of canal boats and other light draught vessels has been completed. This dock is 700 ft. long, and is proving of very great benefit in accommodating the export trade of the railway. The yard at Quebec in rear of this dock has been nearly filled up, thus giving the railway a considerable increase in its yard accommodation. The pulp and cardboard mills and saw mills at the different points on the railway continued to be operated during the past year, and logs have been got out during the past winter to furnish them with a considerable increase of business. The colonization movement to the Lake St. John country has made satisfactory progress, and the Dominion Government is taking an active interest in this work, having

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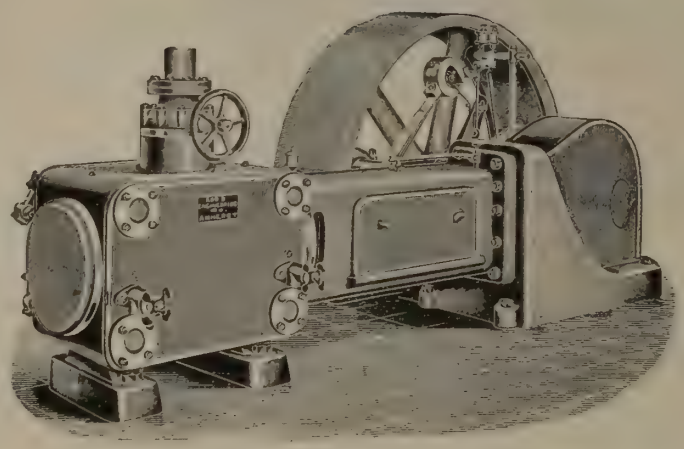

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appointed a special agent to supervise it at Quebec. The board have pleasure in handing over to their successors in office a road in excellent physical condition, well equipped with rolling stock in a good state of repair, and controlling a steady and increasing volume of traffic.

Following are the officers and directors for the current year: President, D. B. Hanna, Toronto; Vice-Presidents, G. Lemoine, Quebec; Z. A. Lash, K.C., Toronto; other directors: F. C. Annesley, W. H. Moore, A. J. Mitchell, F. Nicholls, Toronto; J. T. Ross, E. Beaudet and Senator Tessier, Que. The following are representative directors: J. G. Garneau, as Mayor of Quebec; Hon. Judge Gagne, representing Chicoutimi, and G. Tanguay, M.P.P., and Senator Choquette, representing Quebec Province.

It will be noticed that a number of changes were made in the directorate, consequent on the control having been secured by Mackenzie, Mann & Co.

American Railway Engineering and Maintenance of Way Association.—The annual meeting was held at Chicago, Ill., recently, when a committee report was adopted, recommending changes in the present method of railway signals. The report recommended that the style of signal semaphore now in use be changed so that the signals will be given in the right hand upper quadrant of the circle instead of the lower right hand quadrant. The stop signal remains the same as heretofore, the arm of the semaphore being horizontal. But when the arm is inclined upward 45° it will mean proceed with caution instead of an arm declined the same number of degrees. The arm inclined upward at an angle of 90° will mean proceed instead of an arm declined downward of about the same angle. The association also recommended a change in the old plan of red lights for stop, yellow or green light for caution, and white light for proceed. The association recommended the yellow light for the night signal for caution, and a green light as the night indication for clear, thus doing away with the white light entirely Other questions were discussed and reported on. A. W. Johnston, General Manager New York, Cleveland and St. Louis Rd., Cleveland, Ohio, was elected President, and W. McNab, Assistant Engineer, G.T.R., Montreal, Vice-President. Mr. McNab is the only representative of a Canadian railway holding office.

The Quebec Board of Trade has passed a resolution calling upon the Dominion Government to establish a Canadian Lloyds for the carrying on of a marine insurance business. The resolution declares that the prejudices and pretensions of Lloyds in London are ruinous to Canadian maritime commerce, especially on the St. Lawrence route.

McRae, Chandler and McNeil, Ltd., is the title of a company incorporated under the Dominion Companies' Act, with a capital of $100,000 and offices at Montreal, for the purposes of carrying on a general contracting business in Canada and elsewhere. The provisional directors are: J. A. McRae, Niagara Falls, Ont; W. H. Chandler, J. H. McNeil, Toronto; F. H. Markey, K.C.; R. C. Grant, Montreal.

McCoy and Wilford have been incorporated under the Dominion Companies' Act, with a capital of $49,000 and offices at Lindsay, Ont., to carry on a railway and general contracting business, and to acquire the business heretofore carried on under the title of McCoy and Wilford. Various incidental powers are given. The provisional directors are: P. McCoy, Kingston, Ont.; F. R. Wilford, Mrs. M. M. Wilford, G. H. Hopkins, and F. A. Walters, Lindsay, Ont.

Inquiry re Canadian Northern Railway.

Order 2922 issued by the Board of Railway Commissioners, May 3, recites order 2844 issued April 12, published in our May issue, directing A. F. Dillinger to enquire into certain matters connected with the Canadian Northern Ry., and continues as follows:

"And whereas the said A. F. Dillinger has reported to the Board that the C.N.Ry. Co. is absolutely without facilities for operating even one-half of its mileage at the present time; that its locomotives and car shops at Winnipeg are entirely inadequate to take care of the locomotives and cars which, in the ordinary course, are required to be overhauled at least once a year, these shops being practically the same as those that were taken over from the Northern Pacific Ry. Co. a number of years ago, with the addition of some up-to-date machinery and a building that will take in about five passenger cars for general repairs; that on all well-regulated railways in the west locomotives undergo repairs at least once a year, while the transportation conditions on the C.N. Ry. during the past 12 months have not permitted the usual overhauling of engines, with the result that they are unable to perform the work expected of them; that, at the present time, the C.N. Ry. Co. has 168 engines of all classes to operate 3,000 miles of railway, and that 23 of those engines are undergoing repairs; that the company has on its lines 6,095 of its own cars and 5,008 foreign cars, or a total of 11,103 cars; that for the 30 days preceding his report the C.N.Ry. Co. had moved on an average 39,000 bush. of wheat a day, and that at this ratio it will take the company until Nov. 25, 1907, to move out the balance of the crop on its lines; that "the secret of the whole thing is lack of motive power and facilities for taking care of motive power that they have got, and that the company should have at least twice the power it has to operate its existing lines in anything like a satisfactory manner;

"And whereas it is in the public interest that the C.N. Ry. Co. should, as speedily as possible, procure and place upon its lines the additional locomotives and other rolling stock, appliances, facilities, and equipment necessary for enabling it to receive, carry, and deliver, without delay, and with due diligence, all traffic offered for carriage upon its lines: Now, therefore, in pursuance of the powers conferred upon it by sec. 60 of the Railway Act, and all other powers possessed by the Board in that respect; the Board orders that J. Hardwell, Chief Traffic Officer of the Board, be, and he is hereby, appointed and directed to make inquiry and report to the Board, what new locomotives and other rolling stock, appliances and equipment, in addition to those now possessed by it, the C.N.Ry. Co. has ordered for use on its lines of railway, and when the same respectively can reasonably be expected to be ready for use on such lines; what facilities for repairing and keeping in proper order and condition its locomotives and other rolling stock, appliances, and equipment, in addition to the facilities for such purposes now possessed by it, the C.N.Ry. Co. is now supplying and can reasonably be expected to supply and have ready for use within six months from the issue of this order; Whether, and within what time, and to what extent the C.P.R. Co. can, within six months after the issue of this order, obtain and place upon its line for use further locomotives and other rolling stock, appliances and equipment for receiving, carrying, and delivering traffic, beyond those now possessed and now ordered by the said company. And the Board doth further order that the said J. Hardwell report from time to time to the Board upon any of the matters aforesaid, as he may think desirable or as may be directed by the Board"

Winnipeg Joint Terminals.

The Dominion Parliament at its recent session passed an act confirming an agreement between the Canadian Northern Ry., the G.T. Pacific Ry., the Crown, and the Commissioners of the Transcontinental Ry., respecting the Winnipeg Terminals. In moving the second reading of the act Hon. H. R. Emmerson, then Minister of Railways and Canals, said the Canadian Northern Ry. was not in a position, owing to the fact that the property to be used was covered by various issues and forms of debentures of it and its predecessors, to convey land in fee simple. In lieu of that the C.N.R. conveyed to the G.T.P. Ry., and the Government in common with themselves, equal shares in possession of these lands with the right to use the same for terminal purposes for 999 years. The G.T P. Ry. and the Government were to be assured of the use and possession of the lands under the Act. The present buildings were to be removed and new terminals were to be constructed. The C.N.R. was to do the work under a Superintendent of Construction, who is to be appointed by that company, subject to the approval and removal at the instance of the Government. During the time the G.T.P.R. is lessee of the Eastern Division of the Transcontinental Ry., the C.N.R. is to enjoy a half-interest in the terminal, and the G.T.P.R. and the Government, together the other half interest. When the G.T.P.R. ceases to be a lessee of the Eastern Division of the Transcontinental Ry., the G.T.P.R. and the Government are each to enjoy independently a third undivided interest in the terminals. While the G.T.P.R. is the lessee of the Eastern Division the terminals will be operated by a terminal board of two persons, one to be appointed by each company; and when the G.T.P.R. ceases to be the lessee, the terminal board is to be composed of four persons, two to be appointed by the C.N.R., and one each by the G.T.P.R. and the Government. The compensation to be payable was regulated on the following basis: first, the lands were to be put in at a fixed valuation of $2,625,000, upon which interest at the rate of 4% a year was to be payable, the C.N.R. assuming one-half and the G.T.P.R. and the Government together the other half. Upon the cost of all the improvements to be made on the lands, both in the first instance, and from time to time as may be determined, the rate of interest to be paid is 4½%. While the G.T.P.R. is lessee of the Eastern Division the expenses of the maintenance and operations of the terminals are to be borne by the two railway companies on a wheelage basis, and thereafter if the Eastern Division is operated by the Government itself, the Government would pay one-third, and become a partner in equal shares with the two companies, paying on a wheelage basis. The agreement contains full directions for the guidance of the Terminal Board, and for resort to the courts in case there are any disagreements between the parties upon any points of the same. The general clauses of the act provide that nothing in the agreement shall be taken to over-ride any of the provisions of the Railway Act applicable to the companies or to the joint terminals mentioned in the agreement, that the C.N R. may issue securities for expenses under the agreement, and guaranteeing the use and possession of the joint terminals by the G.T.P.R. and the Government notwithstanding any mortgage or charge, whether securing debentures or otherwise heretofore or hereafter made by the C.N.R., or its predecessors or successors, or any default thereunder. Provision is also made in the act for the use of the terminals by other companies, and for the fixing of charges for the same.

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It is understood that plans for the terminal buildings are being prepared by a New York firm of architects. The new terminals will be situated, a Winnipeg report states, at the corner of Main and Water streets, and will take up a large portion of the ground bounded by Water st., the Assiniboine River, Main st., and the Red River. Another report, also from Winnipeg, states that it has been finally decided to locate the terminals on the Broadway and Main St. site, the Hudson's Bay Co. having refused to alter the agreement made at the time certain lands were sold for terminal and station purposes.

Ontario Railway Subsidies.

The Premier of Ontario, speaking in the Legislature, recently, said the Government still believed in a general way that the time had come to stop the granting of land and the giving of any other assistance to railway construction, except in special cases, where the public interests were clearly served. In connection with the Algoma Central and Hudson Bay Ry., the Government had been urged to give a guarantee of bonds aggregating $8,500,000, in return for which the railway was to surrender its land grant of 20,000 acres a mile. This land grant was one of the securities now held by the Government for its guarantee of bonds of the Sault Ste. Marie industries, and further the time for earning the land grant had expired. The Government, however, had come to a decision to extend the time for earning the land grant for two years, and to release it from certain conditions imposed in connection with the guarantee of bonds by the Government.

The Canadian Northern Ontario Ry. proposed to extend its line from Sudbury to a junction with the Canadian Northern Ry. at Port Arthur, Ont. This line would open up the clay belt of northern Ontario, and on its merits was a line deserving of provincial aid. The company also asked for the revival of the subsidy of $2,000 and 5,000 acres of land a mile in aid of a line from Sudbury to Lake Abitibi, about 175 miles. The Government had decided to revive the cash subsidy only, conditional upon the line being swung to the west, so as not to be a menace to the Temiskaming and Northern Ontario Ry., the Government line. Aid by way of the guarantee of bonds of other lines for the C.N.R., it had been decided not to give.

It had been decided to give a cash subsidy of $5,000 towards the construction of a line of three or four miles long from Thessalon, on Georgian Bay, to the C.P.R. Algoma branch; to extend the time to Dec., 1909, within which the Toronto, Lindsay and Pembroke Ry. could earn the subsidy previously voted; to extend the time to Dec., 1910, within which the Irondale, Bancroft and Ottawa Ry. could earn the subsidy previously voted; and to extend the time for a year within which the subsidy previously voted could be earned by the Bracebridge and Trading Lake Ry., provided $35,000 was expended upon the work of construction by Dec. 31.

H. G. Reid, District Master Mechanic C.P.R., North Bay, Ont., writes: "I have been a regular subscriber to your paper for the past two or three years, and find it very interesting and helpful along mechanical lines."

The Midland Ry. Co. of Manitoba has filed with the Manitoba Government its by-law fixing the maximum passenger rates to be charged on its line, and the same has been approved by the Lieutenant-Governor-in-Council, as required by the Manitoba Railway Act.

Canadian Northern Ry. Construction, etc.

St. John Valley Ry.—The New Brunswick Legislature has passed a bill providing for the guarantee of bonds to the extent of $15,000 a mile for the construction of a railway along the St. John River Valley. The premier in laying the proposition before the Legislature, Mar. 28, said he had discussed the proposal with W. Mackenzie, President, and D. D. Mann, Vice-President of the Canadian Northern Ry., and with C. W. Spencer, General Manager of Mackenzie, Mann & Co.'s Eastern Lines. When it was announced that the National Transcontinental Railway Commissioners' engineers had recommended the adoption of the Central route through New Brunswick, it was felt that a hardship would be done to the people of the St. John River valley, and the Government thought it might aid in the construction of such a railway by the guarantee of bonds. He wrote Mackenzie, Mann & Co. on the subject with the result that that firm said the construction of the line could be arranged upon a guarantee of bonds to the extent of $15,000 a mile. The proposed line would cost for construction and equipment about $30,000 a mile. It was intended by the Government that bonds would not be issued until it was assured that the line would form part of the Canadian Northern Ry. transcontinental line, and that the bonds should also be guaranteed by the Canadian Northern Ry. As a local road there would no doubt be considerable traffic, but that would not be sufficient to justify a guarantee of bonds to the extent of $15,000 a mile.

The resolutions passed provide for the guarantee of principal and interest of first mortgage bonds of the Canadian Northern Ry., or such one of the companies owned and controlled by Mackenzie, Mann & Co. (Ltd.), and forming or intended to form part of their transcontinental railway, as may be authorized by law to construct and operate a line of railway from Woodstock or Centerville, following the valley of the St. John River to Fredericton, and thence to St. John, or to the C.P.R. near Westfield, or as near thereto as may be reasonably practicable. The bonds are to be secured upon a first mortgage of the line to be constructed, and the guarantee is not to exceed $15,000 a mile, the rate of interest is not to exceed 4%, and the principal shall be payable in not more than 50 years from the date of issue as may be determined by the Government. The guarantee shall be endorsed on the bonds from time to time as each 10 mile section is completed and approved of by the Provincial Engineer. The company is to provide in a satisfactory manner for the interest of the bonds during construction, and until the line has been fully completed and equipped to the satisfaction of the Provincial Engineer. The specifications for the building of the line shall require the construction of a first-class railway, to be laid with steel rails of not less than 67 lbs. per yard; the bridges to be of steel with concrete or stone substructures. The company shall be bound to provide by all proper means against the setting or spread of fires along the line. Any money paid by the Government, whether for principal or interest, shall be deemed to be paid in discharge of the liability of the Province, but not in discharge of the liability of the company under the bonds, or under the mortgage. In case the Government should be of opinion that there has been any unreasonable delay on the part of Mackenzie, Mann & Co. (Ltd.) in causing contracts for the construction and operation of the line to be entered into, it may by letters patent incorporate a company for the purpose of constructing and operating such line of railway, with all necessary powers. Upon such company being incorporated the Government may cause its first mortgage bonds to be guaranteed in the manner provided; such company having previously entered into a contract with the Dominion of Canada for the construction of a line entitling it to a subsidy of not less than $6,400 a mile, and further have entered into a contract with the C.P.R., the G.T. Pacific Ry., or the Canadian Northern Ry., for the operation of its line for 99 years at a rental sufficient to meet the interest of the bonds so guaranteed. It is to be distinctly understood, the resolution sets out in conclusion, that "the authority to guarantee bonds hereunder is only to be exercised in respect to such line upon a contract being made for its construction and operation as part of the system of one of the companies owning or constructing a transcontinental railway system, or as part of the Intercolonial Ry.

The resolutions were subsequently embodied in the bill to aid certain railways, and in passing through committee a provision was inserted to the effect that if one of the subsidiary companies of the Canadian Northern Ry. should be utilized to construct the railway, the C.N.R. must either enter into direct covenant with the Crown to pay the principal and interest on the bonds guaranteed or lease the line for 99 years at a rental sufficient to pay interest on the bonds at the rate of 4%. It was also provided that the route to be followed must be approved by the Government prior to the bonds being guaranteed. The estimated length of the projected line is 155 miles. The Premier stated at St. John, May 14, that the surveys for the line would be gone on with at once.

Canadian Northern Quebec Ry.—D. B. Hanna, Third Vice-President C.N.R., is reported as having stated at Quebec recently, that with the construction of its branch lines being proceeded with satisfactorily, he expected the line to reach Quebec in the near future. H. T. Hazen recently completed a trip of inspection over the new lines under contract, and he stated, on returning to Montreal, that very satisfactory progress was being made. Tracklaying on the line from St. Jerome to connect with the Montford and Gatineau branch was expected to be in progress early in June.

Canadian Northern Ontario Ry.—It is expected that the line from Hawkesbury to Ottawa, Ont., will be completed during the summer. Application has been made to the C.P.R. for running rights over the Alexandra bridge, Ottawa, in connection with the company's projected line westward through Pembroke to the French River. The company has filed plans showing an alternative route into Toronto, avoiding the residential districts. Owing to the fact that it is impossible to arrange for the laying out of the entire area in the east end of Toronto, purchased for yard accommodation, this year, the company will not require the tenants of all the houses to move until 1908. The question of the company's entrance into Ottawa has been under consideration, and the Deputy Minister of Railways advised the company, in place of securing a partially independent entrance, to join the G.T.R. at Hurdman's Bridge and come in over that company's line. The only difficulty which this suggestion presents is in regard to a connection with the company's line to the west.

Canadian Northern Ry.—An agreement has been reached between the Mayor of Port Arthur, the C.N. Ry. and the G.T. Pacific Ry., by which a right of way through the city is provided. The C. N. R. will construct north-easterly to the narrows of the Nepigon River, and on between Nepigon and Lory lakes to the Eastern Division of

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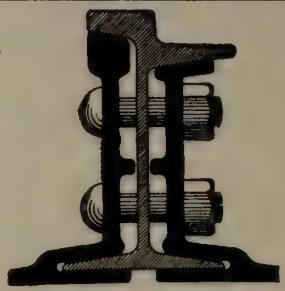
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the G.T. Pacific Ry. The latter railway will have running rights over the line to be so constructed.

G. T. Marks, H. A. Wiley and W. H. Plummer have issued a writ seeking to have the council restrained from proceeding further in the matter, by having the question put to a vote of the ratepayers.

D. D. Mann, Vice-President, in an interview at Winnipeg recently, said: "We will do less construction work this year than we have ever done. The energies of the company will be directed to the work of betterment of lines already constructed, and to supplying of equipment for these lines. The work to be done is of great consequence to the company. It will include the ballasting of hundreds of miles of track and the improvement of the roadway in every way. In addition to this there will be a large amount of building done. We will be occupied with putting up the numerous buildings we require in Winnipeg, which include the joint terminals with the G.T. Pacific Ry. We will commence work on extensive repair shops, etc., which the company require, the plans for which are now being completed by the architects. It will, of course, be impossible that the works should all be done this year, but it is expected that all the work in connection with these matters will be completed during 1908. The general work of the betterment of the line will, of course, be continued from year to year, but the company expects that a great deal of work will be completed in this matter during the present season."

D. B. Hanna, Third Vice-President, who has been making a general inspection of the line, states that the line generally is in a satisfactory condition. At Brandon, Man., May 10, he said a new station, freight shed, etc., costing $100,000, were to be erected.

It has been decided to practically reconstruct the line from Regina to Prince Albert, Sask., the work being started at Regina. It is proposed to lay 280,000 new ties and to relay the line with heavy steel as far as Disley, this year.

The company's bill asking for additional powers to construct branch lines, and an increase of bonding powers, was amended by the Railway Committee of the House of Commons the clauses providing power to construct additional branch lines being withdrawn.

Railway Commissioners' Rate Orders.

2800. April 11. In the matter of the application of the Canadian Freight Association, under the Railway Act, sec. 321, for approval of a proposed supplement, filed as Supplement 8 to Canadian Freight Classification 12: Whereas by order of Oct. 13, 1906, Supplement 7 to said Classification was approved, and by order of Nov. 12, 1906, Supplement 8 to the said Classification was approved. Said supplements were consolidated and issued by the Canadian Freight Association as Supplement 7. Upon the consent of the Canadian Manufacturers' Association and the report of the Chief Traffic Officer of the Board—It is ordered that the changes and additions embodied in the said proposed supplement are hereby legalized and sanctioned until such time or times as the Board shall revise, alter, or amend the same, the same to take effect not later than May 1, 1907.

The question of Sunday labor on the railways is being looked into by the Lord's Day Alliance pretty closely since the new act came into force. Breaches of the act are said to be frequent, and the Alliance is arranging with the Crown Attorney in Toronto to take proceedings against certain railways for typical breaches of the act.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

Rhodes, Curry & Co. have added a rolling mill to their works at Amherst, N.S.

The Canadian Fairbanks Co. has opened a branch office in Quebec, R. Miquelon being appointed manager.

The Modoc Soap Co., of Philadelphia, Pa., manufacturers of the Perfect Car Cleaner, have adopted the word "Perfectol" as their trade mark.

The Canadian General Electric Co. has issued in pamphlet form a well-illustrated description of a visit to its Toronto and Peterboro works.

Robert W. Hunt & Co., Bureau of Inspection Tests and Consultation, have removed their New York office from 66 Broadway to the new West Street Building, 90 West Street.

The Standard Coupler Co. has removed its New York office from 160 Broadway to floor 16, United States Express Building, 2 Rector St., rear of Trinity Church. Its Chicago office has been removed from the Monadnock Block to the Fisher Building.

The Moncton, N.B., Board of Trade has been asked by E. A. Walberg, Montreal, to aid him in securing a lease of the old Intercolonial Ry. shops in that town, with a view of establishing a car works there. A resolution recommending the Town Council to grant free water and light, and tax exemption for 20 years, was passed.

The John McDougall Caledonian Iron Works Co., Ltd., Montreal, has opened sales offices as follows: Montreal, 82 Sovereign Bank Building; Toronto, 810 Traders Bank Building; Winnipeg, 251 Notre Dame Avenue; Nelson, B.C., Josephine St.; Vancouver, 416 Seymour St.; New Glasgow, N.S., Telephone Building. The company's principal products are boilers, water tanks, power plants, water works equipment and all kinds of hydraulic and mill machinery.

The Robb Engineering Co., Amherst, N.S., has issued an illustrated booklet descriptive of Robb-Mumford boilers, Robb-Mumford-Brady boilers, return tubular boilers, vertical boilers and marine boilers, which it manufactures. It has also issued an illustrated catalogue of the Robb-Armstrong engines, built at its works. The illustrations include engines installed by the company in England, Australia, Cuba, Spain, as well as in Canada and elsewhere.

The Prince of Wales, during his recent visit to Scotland, where he and the Princess were the guests of Lord and Lady Blythswood at Blythswood, went to the works of Babcock & Wilcox, Ltd., at Renfrew and spent over an hour going through the various departments. The visit was prompted by the Prince's desire to see the manufacture of water tube boilers similar to those which have been supplied to H.M.S. Dreadnought and other battleships of the most modern type.

S. H. Jones, President of the St. Thomas Brass Co., Ltd., St. Thomas, Ont.; the Canadian Bronze Co., Ltd., Montreal, and the Northwestern Brass Co., Ltd., Winnipeg, has removed his headquarters from Buffalo, N.Y., to 2 Rector St., New York City. The Magnus Metal Co., which has its headquarters in Buffalo, and of which Mr. Jones is General Manager, has sold out to the National Lead Co., a Guggenheimer concern, and its headquarters are now at 111 Broadway, New York.

Babcock and Wilcox, Ltd., Montreal, are supplying 2,000 h.p. additional B. & W. boilers, with superheaters and chain grate automatic stokers to the C.P.R. Angus shops, Montreal. They have also received orders recently from the Diamond Vale Coal Co., Coutlee, B.C.; St. Charles Condensing Co., Ingersoll, Ont.; Viau Freres, & Warden King & Son, Ltd., Montreal; J. R. Booth, Ottawa; Toronto University, Belleville Portland Cement Co., and two additional orders for Winnipeg Water Works.

The Robb Engineering Co., Amherst, N.S., has received the following orders recently: Sydney and Glace Bay Ry., Sydney, N.S., 1 Robb-Armstrong vertical enclosed engine; 2 return tubular boilers; 1 Robb feed water heater steam separator. Brockville Light and Power Co., Brockville, Ont., 1 return tubular boiler. Alberta Portland Cement Co., Calgary, Alta., 1 Robb-Armstrong cross compound Corliss engine. Vanderbeek & Sons, Jersey City, N.J., 1 Robb-Armstrong engine on skids, 1 return tubular boiler with castings for Dutch oven, 1 smoke stack, 1 Duplex steam pump, 1 complete rotary mill, 1 complete lath mill. Town of Truro, N.S., 1 Robb-Mumford water tube boiler, 1 Duplex feed pump, 1 Robb feed water heater. Intercolonial Ry., Moncton, N.B., 3 Robb-Mumford boilers. Mackenzie, Mann & Co., Ltd., Toronto, 1 Robb-Armstrong engine, 1 vertical engine, belted, 2 return tubular boilers, 1 Robb feed water heater, 2 Duplex feed pumps.

Railway Subsidy Contracts.

The following subsidy contracts have been entered into by the Dominion Government during the current year:

CANADIAN NORTHERN QUEBEC RY.—From near Garneau Jct. to or towards Quebec Bridge, 70 miles. Connecting its Montford and Gatineau line with the main line at St. Jerome, Que., 22 miles. (April 8 and 10.)

KLONDIKE MINES RY.—From Dawson to near Sulphur Springs, 31 miles; from near Sulphur Springs to the divide between Dominion and Flat Creeks, 45 miles; from the said divide to Stewart River, eight miles. (May 10.)

KOOTENAY CENTRAL RY.—From Golden towards the International boundary line via Windermere and Fort Steele, crossing the Crow's Nest Pass Ry. at or near Elko, B.C., 186 miles. (April 4.)

QUEBEC AND LAKE ST. JOHN RY.—From Roberval to the Government wharf at Lake St. John, Que., one mile. (Nov. 24, 1906.)

QUEBEC CENTRAL RY.—From St. Francis to St. George, Que., nine miles. (Jan. 28.)

TILLSONBURG, LAKE ERIE AND PACIFIC RY.—From Woodstock or from Ingersoll to Stratford, Ont., 35 miles. (Jan. 22.)

Canadian Railway Club.—At the annual meeting in Montreal May 7, the following officers and committees were elected for the current year: President, W. D. Robb, Superintendent Motive Power G.T.R.; First Vice-President, L. R. Johnson, Assistant Superintendent of Motive Power, C.P.R.; Second Vice-President, H. H. Vaughan, Assistant to Vice-President, C.P.R.; Executive Committee: W. E. Fowler, T. McHattie, A. A. Maver, W. M. Dietrich, W. H. Evans, Professor Morgan and G. T. Bell. Audit Committee: A. G. Walker, W. H. Gault, J. S. N. Dougall. J. Powell, chief draughtsman motive power department G.T.R., was re-elected Secretary, and S. S. Underwood, of the G.T.R., Treasurer.

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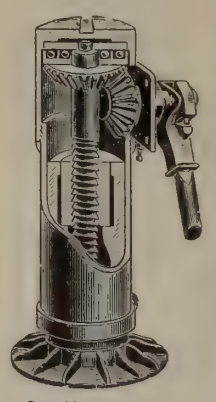
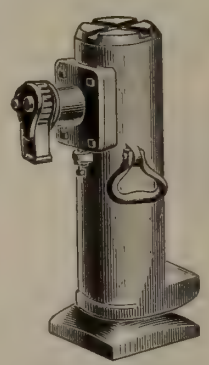


Sectional View



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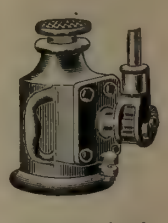

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Reports on Railway Accidents.

The Board of Railway Commissioners has decided to make public the reports of the investigations into the accidents on the C.P.R. at Mountain, Ont., on Mar. 1, and at Brunel, Ont., April 1. The report of E. C. Lalonde, Inspector of Accidents, on the Mountain accident is as follows:

"The accident was a head-on collision between passenger train 6, engine 908, conductor W. Burt, baggageman A. Lesperance, brakeman E. Williams, engineer J. Hartney, and fireman H. Richmond; and westbound extra freight train 984, conductor H. Scott, brakemen E. Suffel and W. J. O'Mara, engineer J. E. Manyon, and Fireman J. A. Rennick—in the yard at Mountain at 6 a.m.

"The cause of the collision was the failure of engineer J. E. Manyon, of train 984, to determine correctly the place where to meet the fast passenger train 6, when receiving despatcher's order 36, on form 19, at Winchester, advising that train 6 was running 50 minutes late from Kemptville Jct. to Vaudreuil.

"The result of the collision was that Engineer J. Hartney, of train 6, H. Richmond, fireman, and A. Lesperance, baggageman, employes of the same, train were injured, and W. Hitchins, Dominion Express messenger, and his assistant, J. J. Nicholson, of the same train, were burned to death while pinned in express car 1765, which was set on fire by oil lamps lighted in the car at the time of the collision.

"From the evidence it is shown that passenger train 6 was a superior train as to class and direction, and not scheduled to stop at any place between Kemptville Jct. and Vaudreuil. It consisted of six cars, two express and baggage cars, tourist car, Wabash passenger car, Pullman car Amedeo, and a C.P.R. sleeping car Algoma. The cars were equipped with and were burning gas except in the two express and baggage cars which were lighted by 4 ceiling lamps and two desk lamps. At 5.25 a.m. despatcher McRae issued an order, 36, addressed to train 6 and extra freight 984, 3rd no. 50 at Finch, extra 976 and 2nd no. 50 at Monklands, as follows:

"'Order No. 36.—No. 6, engine 908, will run 50 minutes late Kemptville Jct. to Vaudreuil.'

"The above order was correctly delivered to Conductor Burt, of the passenger train, at Kemptville Jct. This train is scheduled to leave Kemptville Jct., eastbound, at 4.59 a.m.; and being reported 50 minutes late, she was due to leave at 5.49 instead of 4.59 a.m., and left at 5.54 a.m., 5 minutes later than the time specified in the order. According to her scheduled running time 50 minutes late, plus five minutes more delay at Kemptville, she was due to pass Mountain, where the collision occurred, at 6.04 a.m. At 5.40 a.m., Fireman Rennick, on extra freight 940, the westbound freight train, consisting of 44 cars all told, while passing at Winchester, reecived from the agent order 36 on form 19, which he read and handed over to his engineer, J. E. Manyon. It read as follows:

"'No. 6, engine 908, will run 50 minutes late Kemptville Jct. to Vaudreuil.'

"A similar order was handed to Conductor H. Scott, when the van passed the station. Just previous to coming into Winchester. Engineer Manyon had looked at his watch and read the time 4.30 a.m. instead of 5.30 a.m., one hour earlier than it was. It was actually 5.30 a.m.; and after receiving this order he said to his fireman: 'We will have time to go to Kemptville and get coal before no. 6 is due there.' Fireman Rennick never looked at his watch to compare the time with his engineer, nor ascertain whether the engineer was right in his calculation or not. The train proceeded right along; and after passing Inkerman, the first station west of Winchester, he looked at his watch again and read it 4.48 a.m. instead of 5.48, and was proceeding with the intention of meeting no. 6 at Kemptville Jct., whereas he should not have gone further than Mountain, to clear the main line in time for no 6. Ten minutes was about the running time for extra 984 to get to Mountain, which would have made Mountain at 5.58 at the east end switch; and the collision occurred west of Mountain station at 6 a.m. As per C.P.R. rule, extra 984 should have been cleared of the main line at least five minutes before no. 6 arrived, or rather was due to pass.

"'Rule No 86 reads: 'An inferior train must keep out of the way of a superior train.'

"'Rule 214A: 'Engineers must read their train orders to their firemen, and conductors to their rear brakemen.'

"In this matter Engineer Manyon and Fireman Rennick knew perfectly well the contents of the order and should have compared their watches; the engineer should have read the order to Fireman Rennick, as per rule 214A. The head-end brakeman, E. Suffle, was riding in the engine cab after leaving Winchester, and was not made aware of the contents of order 36. Only the engineer told him and the fireman as follows: 'We have lots of time to go to Kemptville to take a little coal and water'; and nothing was said about the time. Conductor H. Scott received similar order as above stated; read the order to the rear-end brakeman W. J. O'Mara; and neither of them made a move to ascertain or to figure out the meeting point, only when too late to avoid the catastrophe.

"I therefore find that engineer of extra freight train 984, J. E. Manyon, and Conductor H. Scott, are responsible for this collision. inasmuch as they neglected their duty in regard to meeting no 6, thereby violating the company's rules: and Fireman J. A. Rennick is also responsible for not checking or comparing the time with his engineer, Manyon. Rear-end brakeman W. J. O'Mara is responsible for neglecting to signal the engineer to stop at the east end switch, to go on the siding, and neglecting to comply with rule 86. Despatcher McRae acted in violation of instructions set forth in rule 38 by completing the 19 order to extra 984 before 31 order was delivered to passenger train 6. The Assistant Superintendent, R. W. McCormick, being questioned on this matter, has admitted that it was a violation of instructions, and that McRae, the despatcher, in this case has since been dismissed for the above reason

"In view of the fact that there were no means of extinguishing the fire set to the baggage car after the collision, that the life of the two victims might have been saved if the fire had been checked by some available means, and that in cases of that kind water is rarely obtainable. I beg to recommend that the railway companies be requested to instal in each car on passenger trains sufficient underwriter fire extinguishers to be used in cases of fire."

THE BRUNEL ACCIDENT.

This accident was the derailment of passenger train 1, three-quarters mile east of Brunel, Ont., at 11.27 a.m. It was investigated by T. L. Simmons, Assistant Engineer, who reported as follows:

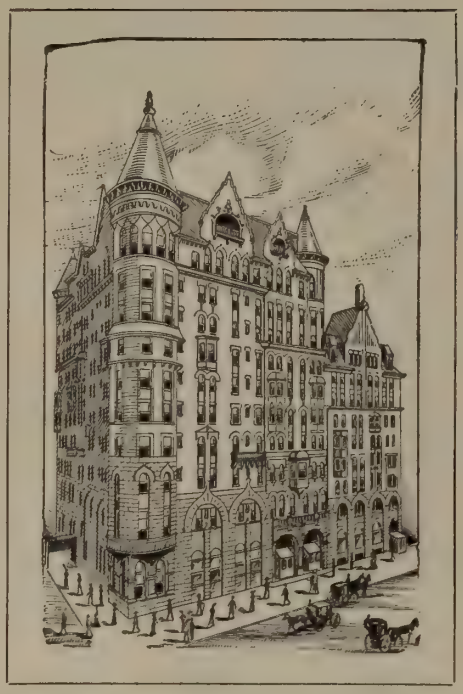
"On April 13, I inspected the scene of the accident which occurred near Brunel station, about 22 miles west of Chapleau. I was accompanied by A. L. Hertzberg, the company's Engineer of Maintenance, and W. K. Thomson, Assistant Superintendent. The accident was caused by a broken rail on the outside of a 5° 30″ curve, or, in other words, a curve having a radius of 1,040 ft. I examined the broken rail carefully and it appeared to be a good quality of close-grained steel and quite flawless except for a small portion about the size of the end of a lead pencil on the extreme outside of the base of the rail. The rail was 73 lb. to the yard and was manufactured by the Johnson Co., Lorain, in 1898. About 11 miles of these rails were placed in the track in the summer of 1898 and there was not a single failure until last winter when two broke. The rail appears to have been broken by the engine passing over it; the west side of the brake had been hammered by the wheels of the mail car and the express car passing over it. Then the rail on the east side of the break appears to have sprung out about half the width of the head of the rail, as there is the mark of the flange of the wheel where it mounted the rail.

The flaw referred to in the rail was very small, and could not be detected until after the rail was broken. The track in the vicinity is in good condition; the embankment is of standard width, and the rails and ties are in good condition. At the point where the rail was broken, the track had been shimmed up about half an inch, showing that the trackmen were paying attention to the track. The inner rail on the curve was not disturbed, and the ties were so little damaged that it was not necessary to replace them in repairing the track. I am of opinion that, considering the severity of the past winter, the company had done everything to keep the track in condition, and that the accident was due to something which they could have no knowledge of, and consequently were unable to provide for.

"At the time of the accident the train was running at a moderate rate of speed, and was made up of an engine, mail car, express car, baggage car, colonist car, two tourist cars, 1st class car, then another tourist car, then dining car and sleepers. For convenience I have numbered them, commencing with that next to engine. Cars 1 and 2 stayed on the track, car 3 was the first to leave the rails, and was followed by 4, 5, 6, 7, and 8. The dining cars and sleepers stayed on the track. The cars went off the track where there is a slight cut of about 3 ft., and about 100 ft. farther the cut runs out and the track runs on an embankment about 15 ft. high along the shore of a small bay of Lake Windermere. As soon as the cars emerged from the cut they went down the embankment on to the ice, and car 5 pushed past car 4 and lay parallel to it. Car 6 pushed the rear ends of these cars farther out on the ice. Five cars were burned, but the great loss of life all took place in car 5. From what information I could gather, it appears that car 4 turned over on its side, the bottom of the car where the gas tanks are located being close to the windows of car 4, or possibly from the tanks of both cars 4 and 5, entered the broken windows, and in some way became ignited, setting fire to the interior of the car so rapidly that a number of the passengers had no time to escape. I am of opinion that if there had been no gas on the train, not a life would have been lost."

In connection with the foregoing Inspector Lalonde says: "I beg to call the attention of the Board to that part of Mr. Simmons' report where he says: 'I am of the opinion that if there had been no gas on the train not a life would have been lost.' I fully concur in his opinion, with the additional fact that if the passenger coaches had been equipped with fire extinguishers, there is no doubt that most of the victims would have been saved; and I beg to recommend here what I recommended in my report on the accident at Mountain: that all passenger coaches should be equipped with underwriter fire extinguishers to be used in case of fire to rescue those imprisoned or pinned in the debris of any wreck."

The Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co. has filed with the Board of Railway Commissioners a local mileage freight tariff, to be used in the absence of special tariffs giving lower rates, subject to Canadian freight classification.



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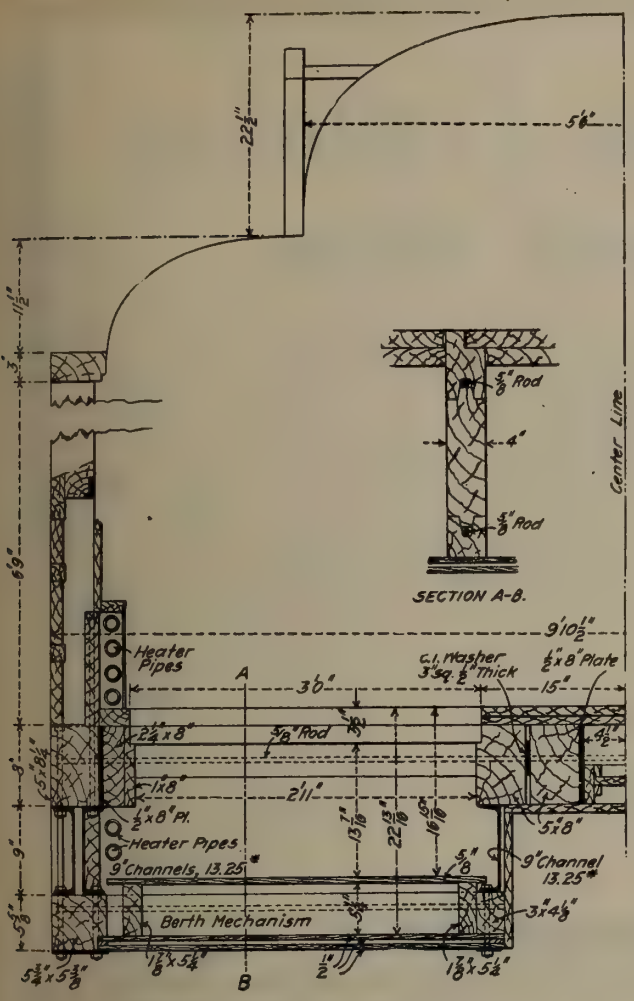


CANADIAN NORTHERN ONTARIO RY. COMBINATION CAR—HALF CROSS SECTION SHOWING UNDER FRAME.

Combination Cars for C.N.O.R.

The Canadian Northern Ontario Ry. has received from the United States a combination parlor, dining and sleeping car, named Balmoral, which is the first of an order for four. The others are to be named Buckingham, Windsor, and Warwick, respectively. These cars are 72½ ft. long over end sills, 9 ft. 10½ ins. wide over side sills, and 14 ft. 6½ ins. high over all, the inside height being 6¾ ft. from top of sill to bottom of plate. At one end is an observation platform and an observation room, 9 ft. 8 ins long, containing six wicker chairs and a top which can be made up into a lower and an upper berth. Next comes the men's toilet and smoking room, 8 ft. 11 ins. long, and then the main room, 32 ft. 9¾ ins. long. Beyond that are two ladies toilets, one on each side of the passageway and a large kitchen in the end of the car. The kitchen end has a wide vestibule.

The berths are arranged so that the car can be converted from a parlor and dining car into a sleeping car for night travel. There are 20 large upholstered chairs for day use and the berths and bedding are stored in ventilated steel pockets built in the framing below the floor, and entirely concealed by the flush trap doors which form the body of the floor. To make up a berth the two chairs over a section are moved to one side and the double trap doors, 6 ft. 2 ins. long, are raised to a vertical position, forming the partitions between adjoining sections. The upper and lower berths are then raised out of the pocket to their proper height by means of light wire cables passing over sheaves on the partitions and around a winding drum under the berth pocket. This drum is turned by an extension crank handle passing down to a pinion under the floor. The two berths are raised to their proper height and made up into beds, and the chairs, hand baggage, etc. are stowed away in the pocket under the floor. Berth curtains are hung from a curtain rod carried on hangers which pull out from under the deck. It is claimed that there is 6 ins. more headroom in the lower berth than in an ordinary sleeping car, and that the berths are wider. The windows are high and the upper berth is lighted and ventilated from the outside. For use as a dining car, 10 double tables are carried in a large locker next to the kitchen and these are put up when required between each pair of chairs as in a cafe parlor car. Panelled lockers are provided in the wide piers between windows in which table silver is stored when not in use.

The peculiar construction of the berth pockets below the floor requires a special design of heavy composite underframe. Above the side sills the framing is standard with a few unimportant modifications. The side sills are made up of three timbers 8 in. deep with a total thickness of 8¼ in. and a ½-in. x 8-in. steel flitch plate. For the length of the berth pockets two 9-in. 13.25-lbs. channels are bolted under the main sill and below these is another timber 5¾ in. x 5⅝ in. The four center sills are continuous from end to end of the car, and are made up of 5-in. x 8-in. timbers with two ½-in. x 8-in. flitch plates. Under the centre sills are two 9-in. channels forming the inside walls of the berth pockets. The reinforcement of the sills makes unnecessary the use of cross-bearers between bolsters which would interfere with the berth pockets.

The car is finished inside with inlaid polished mahogany except in the kitchen, which is finished in cherry. The ceiling is painted a light olive green with gold decoration and art glass is used in the deck windows and over the side windows. The car is lighted by acetylene gas and heated by steam, and in every respect is equipped with the most modern and luxurious fittings.—Rd. Gazette.

National Transcontinental Railway.

The Dominion Parliament at its recent session voted $5,672,000 for surveys and construction of the Eastern Division.

By an act passed at the recent session of the Dominion Parliament it is provided that sections 2, 3 and 4 of the Wages Liability Act, chap. 98, of the Revised Statutes of 1906, shall apply to contractors and sub-contractors in the construction of the Eastern Division of the National Transcontinental Ry., or any part thereof, let under contract by the Commissioners, the Commissioners being substituted in the sections, for the purposes of such application, for the Minister entering into a contract or by whom the work under contract is being executed.

Tenders were invited by the National Transcontinental Ry. Commission for the construction and erection of six steel bridges in District F. The bridges are to be erected at the following points, the date given being the date when the work is to be completed: East and west branches of the Brokenhead River, Whitemouth River crossing, C.P.R. crossing near Rennie, Man., Feb. 1, 1908; Winnipeg River crossing, Mar. 15, 1908; Wabigoon River crossing, July 1, 1908. The bridges are to be constructed to carry the load designated as heavy in the general specifications for steel bridges of the Department of Railways and Canals. It was subsequently stated, however, that owing to the impossibility of the bridge building companies supplying the materials within the time required, the work had been withdrawn, that temporary bridges would be put up, and tenders for the permanent structures would be again called for in 1908.

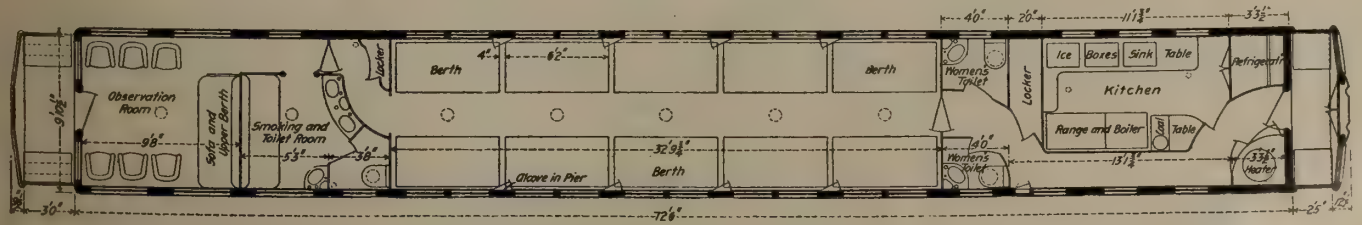
It is understood that the G.T. Pacific Ry. Co. will sublet the contracts for sections of the Eastern Division, which were recently awarded it by the commissioners. Work has been commenced near Edmundston, N.B., by Lyons and White, on their contract, Division 5. A number of sub-contracts have been let.

GRAND TRUNK PACIFIC RY.

J. D. McArthur, Winnipeg, who has the contract for the Eastern Division from Winnipeg easterly to Lake Superior Junction, Ont., has arranged for the Eastern Construction Co., Ottawa, to take over a portion of the contract. The total length of the line covered by the McArthur contract is 245 miles, but owing to the difficulties of the work, and the scarcity of labor, progress has not been as rapid as was anticipated.

It was stated in the House of Commons recently that the G.T. Pacific Ry. was, by an order-in-council, considered to be the first applicant for coal lands along the right of way in Alberta, Saskatchewan and British Columbia.

The B.C. Government has warned G.T. Pacific Ry. officials off the Indian reserve adjoining the Prince Rupert townsite, and a report from that place states that the entire surveying staff has been withdrawn and work generally has been suspended at the Pacific terminus of the line.



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CHAS. O. MARQUETTE - MANAGER

Quebec Central Ry. Meeting

The following report for the year ended Dec. 30, 1906, was presented at the annual meeting in London, Eng., April 24:

1905.		1906.
$789,205	Gross earnings	$904,866
528,380	Working expenses	582,916
$260,825	Net earnings	$321,950
476	Interest on deposits	6,174
$261,301	Net revenue	$328,124

This statement shows an increase in gross earnings of $115,661, an increase in working expenses of $54,536, and an increase in net earnings of $61,125. The addition of $11,553 brought forward from 1905 made the available balance $339,677. After providing $99,983 for the year's interest on the outstanding prior lien bonds, and 4% debenture stock issued, $27,500 was charged against net revenue for alterations, additions, and improvements to stations, buildings, etc. There then remained a balance of $212,194, out of which has been paid the interest on the 3% second debenture stock, and the full interest on the 7% income bonds. These two payments absorbed $164,493, and left a surplus of $47,701, of which $29,000 has been applied to the replacement of two locomotives, $6,000 to the renewal of passenger cars, leaving a balance of $12,701 to be carried forward.

At Dec. 31, 1906, £329,337 of the 4% debenture stock had been issued. Of this £199,500 had been used for retiring prior lien bonds, of which £150,500 remained outstanding Dec. 30, 1906. The new extension of the Chaudiere Valley branch from Beauceville to St. George, a distance of nine miles, was opened for traffic Dec. 17, 1906, after being examined and fully approved by the Government engineers. It is anticipated that this addition to the system will develop fresh sources of traffic. Ice-house equipment and six refrigerator cars were placed in service in the early part of the summer to comply with the Dominion Government dairy department cold storage requirements, and the results have fully justified the expenditure entailed. The accounts have been audited by M. Young, accountant, of Toronto, as special auditor.

GENERAL BALANCE SHEET.

Share capital	£694,850	$3,381,603.33	
5% prior lien bonds	150,500	732,433.33	
4% debenture stock	329,337	1,602,773.40	
3% debenture stock	338,000	1,644,933.33	
7% income bonds	338,000	1,644,933.34	
Wages unpaid, Dec. 31, 1906			22,910.08
Sundry outstanding accounts			146,644.82
Interest on prior lien bonds unclaimed, accrued but not due			17,439.31
Interest on 4% debenture stock accrued but not due			28,695.17
Interest on 3% debenture stock unclaimed			352.41
Interest on 5% income bonds unclaimed			2,907.69
Interest on 7% income bonds unclaimed			5,872.17
Reserve contingent fund, Dec. 31, 1906			46,786.60
Net revenue balance Dec. 31, 1906			212,194.41
			$9,490,479.39
Cost of main line extensions and equipment, Dec. 31, 1905		$8,640,320.49	
Capital expenditure, 1906—			
Chaudiere Valley br'n'h St.George extension	$163,797.04		
New equipment	69,295.55		
		$233,092.59	
			$8,873,413.08
Investments in other companies			25,995.95
Sundry outstanding accounts			113,683.86
Sundry outstanding traffic accounts			13,836.31
Old rails			11,087.30
Materials and supplies			81,997.22
Fuel			27,411.85
Cash in hand, in bank, and in transmission			164,169.42
Cash in bank in London			178,884.40
			$9,490,479.39

The President, E. Dent, in moving the adoption of the report and statement of accounts, said: The gross earnings for 1906 were $904,866, the largest in the history of the company, being an increase of $115,661 over 1905, and the net earnings were $321,950, an increase of $61,126. The permanent way has been kept in good condition, over 58,000 new ties having been placed in the road, while 11 miles have been relaid with 70-lb. rails in substitution for old 56-lb. rails. This is the first time since the reconstruction of the company that the holders of the securities given in exchange for the old first mortgage bonds have received the equivalent to their full interest. As you may remember, each £100 5% first mortgage bond was exchanged into 5% income bonds, and these were afterwards split into equal proportions of 3% debenture stock and 7% income bonds. Payment in full of the interest on the new securities is equivalent to the full interest on the original bonds. There may be some on the other side of the table, as there are on this, who have retained their original investments in the company through the changes since 1881, when the old first mortgage bonds were issued. At the time of the default in 1886, before a bondholders' committee was appointed, the price of the bonds was about 20, but the securities now representing them are not only receiving their full interest, but the combined value of the two securities, at the selling price of to-day, is about 92½, the actual issue price of the original bonds. Last year was one of extraordinary business activity throughout the whole of Canada, including, of course, the Province of Quebec. There were no extra expenses for removing snow or working snow ploughs, and in the spring there was no interruption or loss of traffic on account of floods. The hauling capacity of engines in the winter was almost equal to summer conditions; as a rule it is anything from 25 to 40% less. The increase in passengers carried was over 18,000, and in freight moved the increase was over 100,000 tons, or more than 20%. Some of the old locomotives have been replaced by new, but as the latter are more powerful, an economy in haulage has been, and will be, effected. The construction of an extension from Beauceville to St. George was commenced on July 1, and has been in operation since Dec. 17, the day of its completion. This is a valuable addition to the Chaudiere Valley branch, and will add considerably to the traffic now existing. Already satisfactory development is being shown, new mills have been erected, and various industries are in course of being established. The General Manager wrote last month that there were some thousands of car-loads of traffic in sight on this extension, which will be handled this year. He says also that the inspection and reports of the Government engineer show that all the work done was first class in every particular. During the year it was hoped to divert and reconstruct part of the existing line from Beauce Junction to Beauceville. This branch of 15 miles along the Chaudiere Valley was constructed some 25 years ago, and at that time was believed to be above high-water mark, but owing to the gradual clearing of the timber the water now rises higher than formerly, and during the spring, for weeks at a time, a portion of the line has sometimes been submerged. The cost to the company of this diversion will be made up by the saving in expense in repairing the line every spring after the floods subside, as well as the gain by preventing a loss of revenue, which was often incurred owing to the interruption of traffic on the branch, which has now become an even more important one since its extension to St. George. We need not commence the building of the Scotts branch until 1908 or 1909, as from the latest reports it does not seem probable that the Quebec Bridge will be completed before 1909 or 1910. The earnings for the first three months this year show a decrease as compared with last year. This decrease is accounted for by the unusual severity of the weather and continuous low temperature, and also to the lack of car supply, which has been general throughout the country. The car shortage has been caused by the difficulties of operating owing to the severe weather, and also owing to the large increase in the amount of traffic offering. At present the situation is being considerably relieved, a better supply of cars coming in from connecting roads. The weekly earnings are now showing increases, and the outlook for traffic is favorable. The resolution was seconded by A. Bremner and passed unanimously.

The directors, E. Dent, A. Bremner, T. Lindley, and F. H. Norman, of London, Eng., and F. Grundy, Sherbrooke, Que., were re-elected. The other director, L. A. Carrier, M.P., of Levis, Que., is appointed by the Province of Quebec.

Temiskaming and Northern Ontario Ry.

The annual report of the Commissioners for the calendar year 1906, shows that the line from North Bay to Englehart, 138 miles, was being operated, and 75 miles of line were under construction. The property of the Commissioners is insured for $622,346.15 against fire; at the rate of 49c. per $100; the Commissioners' staff and operating employes are insured for $212.000 in connection with the Employers' Liability Act; and $40,000 of guarantee insurance is carried. The Kerr Lake branch, about five miles long, is being constructed by McQuigge and Hunt, who are also building the Haileybury spur. The Canadian Construction Co. has the contract for the Charlton branch, eight miles. J. L. Englehart was appointed chairman in Nov., and F. Dane was appointed commissioner. C.B. Smith retains his position as consulting engineer; the positions of Superintendent and Traffic Manager have been divided, J. H. Black being given the Superintendency, and W. D. Cunneyworth appointed Freight and Passenger Agent. A. A. Cole was given charge of the mining properties, and V. T. Bartram of the purchasing department. Following is the general balance sheet.

LIABILITIES.

Loan from Province		$9,248,454.80
Accounts payable		208,770.58
Unclaimed wages		456.65
Deposits on contracts		7,500.00
		$9,465,182.03

ASSETS.

Cost of road and equipment to Dec. 30, 1906		$7,426,805.84
Cost of 1st Division for 1906		507,967.57
Cost 2nd Division for 1906		1,148,842.34
Cost of equipment, 1906		333,620.56
Discount, stamps, and underwriting, London Loan		232,666.66
		$9,649,902.97
Less proceeds of sale of townsites and mining lands applied on cost of road	$123,674.60	
And proceeds from operation applied by the Treasurer of Ontario on original loan	100,000.00	
		223,674.69
		$9,426,228.37
Expended on James' Bay exploration		4,357.83
Chief Engineer, advance		6,000.00
Accounts collectable		11,864.82
Accounts collectable, operation		9,131.14
Material on hand		7,447.06
Cash in bank		152.81
		$9,465,182.03

RECEIPTS.

	1906	1905
Passenger	$254,759.33	$108,681.76
Mails and express	17,596.35	7,804.85
Freight	230,552.63	121,530.46
Telegraph and telephone	20,514.53	4,697.07
Miscellaneous receipts	20,596.01	11,006.41
	$544,018.85	$253,720.55

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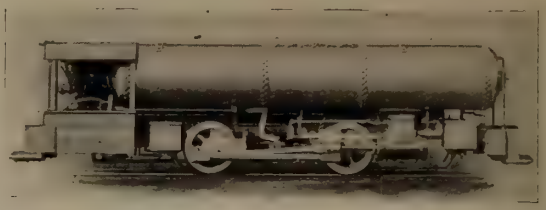

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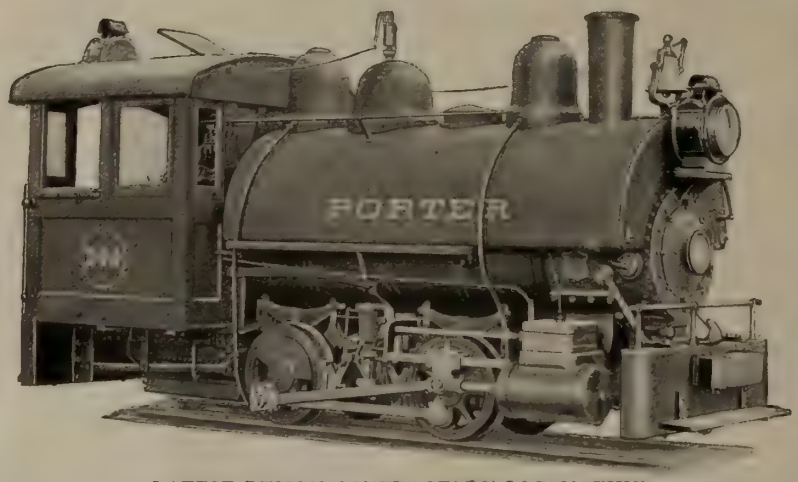

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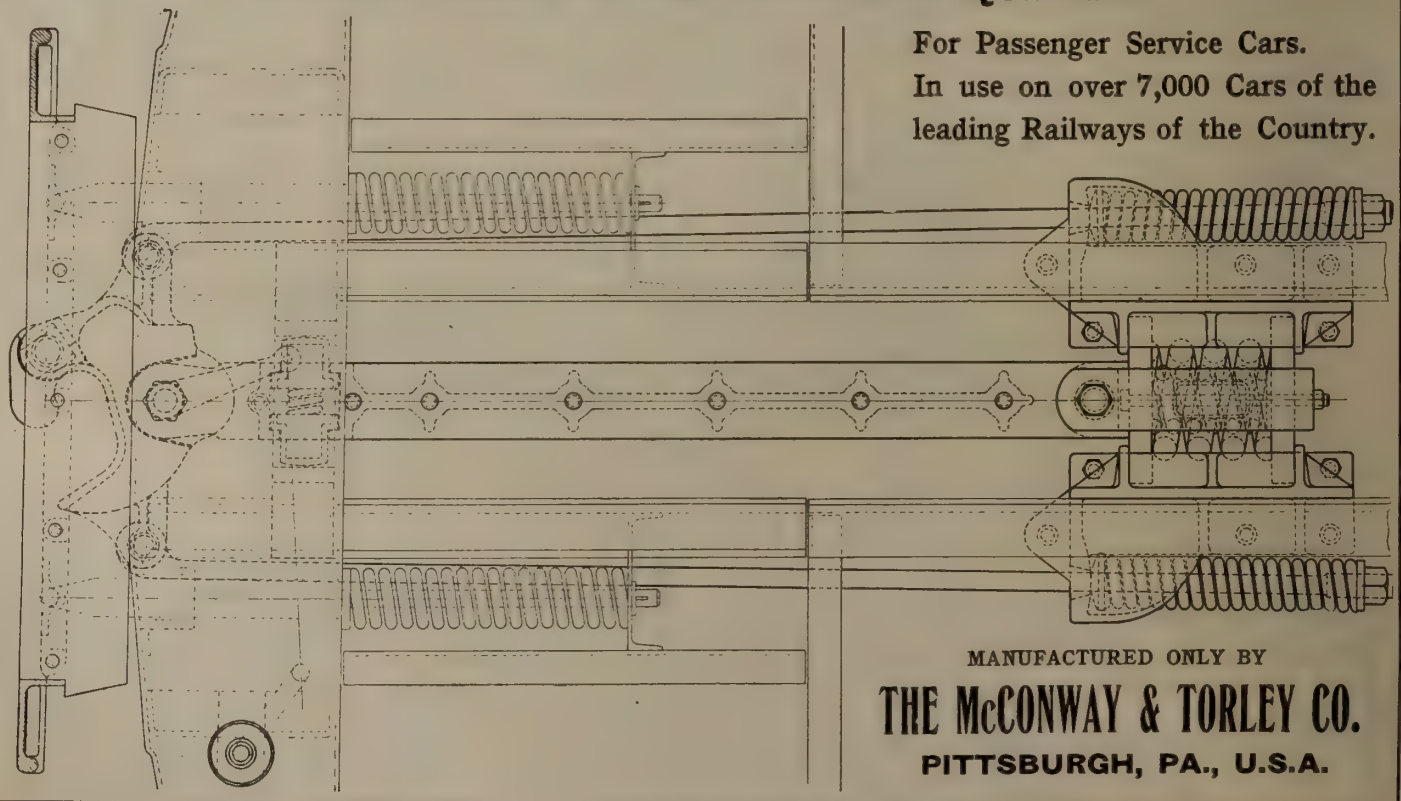

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EXPENDITURE.		
Maintenance of way and structures	$ 77,265.87	$ 25,072.89
Maintenance of equipment.	46,382.65	12,533.68
Conducting transportation.	215,256.08	88,342.41
General expenses	23,194.61	13,823.52
Taxes	393.37	.....
	$362,492.58	$139,772.50
Operating expense to earnings	66%	55%

The report of E. A. McCarthy, Chief Engineer, gives details of the work done by the contractors on the extension northerly, and of the Commissioners' staff on the maintenance; while the Superintendent and the Freight and Passenger Agent report on traffic, and the growth of the population and industries along the line. The Master Mechanic gives a list of rolling stock and equipment as follows: 14 road engines, two switching locomotives, two official cars, 10 first-class passenger cars, 11 second-class passenger cars; nine mail, baggage and express cars; 10 stock cars, 50 box cars, 223 flat cars, nine conductor's vans, two snow plows, two flangers, one unloader, one wrecking crane, one steam shovel, and two gravel plows. The report also contains a statement as to the work of the mining agent, and copies of the various contracts entered into during the year.

Canadian Railways Finance Co.

At the Carey Street offices of the Board of Trade, in London, Eng., recently, a meeting of creditors and contributories in the Canadian Railways Finance Co. was held, under the presidency of H. W. Winearls, Official Receiver, who reported that no statement of affairs had been lodged, but it was estimated that £9,500 was due to bondholders, and £386 to unsecured creditors, whilst the only asset of value was a balance of £3 16s. 9d. at the bank. The company was formed to acquire the rights, powers, and privileges conferred by an act of the Canadian Parliament for the incorporation of the "Hudson's Bay and Pacific Railway Co.," but the only right the Official Receiver could discover was the liability to subscribe for £850,000 in shares. Negotiations were opened with L. G. Tewkesbury (who carried on business as the Investment Corporation of England) and other parties to make the necessary arrangements. In order to provide capital the company created £100,000 in bonds of £50 each, exchangeable into A shares, which according to a circular issued by the Investment Corporation, would be worth not less than £1,875 each. The Investment Corporation agreed to take these debentures at 50% discount at the rate of £10,000 a month, and in turn it promised to pay its agents £12 10s. commission for each bond disposed of. The directors repudiated the Investment Corporation's circulars, describing them as incorrect and misleading. Ultimately Tewkesbury was made bankrupt and the whole thing collapsed. At the meeting Col. Harris said he regarded the company as a swindle from its inception, and after an angry discussion, in which G. A. Whigham, a director, took part, the liquidation was left in the hands of the Official Receiver.—Canada Gazette, London, Eng.

The Hudson's Bay and Pacific Ry. Co. was incorporated by the Dominion Parliament in 1896, and acts granting extensions of time for construction were passed in 1898, 1901, 1903, and 1905. The provisional directors named in the act were: Admiral A. H. Markham, Capt. E. Burke, R.N.; Col. J. Harris, J. Weston, London, Eng.; J. R. Stewart, J. Reid, Glasgow, Scotland; G. H. Massy, J. Cochrane, Montreal, Que.; J. Ross, Niagara Falls, Ont.; W. F. Orr, Calgary, Alta., and S. J. Dawson, Port Arthur, Ont. The company was authorized to construct a railway from Port Churchill on Hudson Bay, through the territory north of the Churchill River to deep water at or near Fond du Lac, on Lake Athabasca, and from Port Churchill, Hudson Bay, through the territory north of the Nelson River, to or near the north-west end of Lake Winnipeg, thence through Saskatchewan to Prince Albert, thence through Alberta to Calgary, and also to construct and operate a branch line from near Manitou Lake, Sask., to Edmonton, Alta.

G.T.R. Betterments, Construction, Etc.

Montreal Track Elevation.—By an act passed at the recent session of the Quebec Legislature the Montreal City Council has been authorized to appropriate $2,000,000 towards the elevation of the G.T.R. tracks in the city. The civic deputation which recently visited Philadelphia, Pa., to look over the work of track elevation which has been carried out there, gathered a good deal of information which will be of value to them in arranging the agreement with the company, and in carrying out the work. The estimated cost of the work, a G.T.R. official states, will be more than $4,000,000, and the company asked the city to pay one-half of the cost.

St. Lambert-Ste. Rosalie Second Track.—A contract has been let to McRae, Chandler and McNeill for the construction of a second track between St. Lambert and Ste. Rosalie, Que., 33 miles. The work will, it is understood, be completed in the fall.

Station Buildings.—The work of reconstructing the Union Station at Sherbrooke, Que., will be taken in hand during the summer. Exclusive of the Ottawa and Toronto stations, the company proposes to erect 20 new station buildings in Ontario during the year. New freight shed accommodation is to be provided at Brantford, Ont.

Lindsay Westerly.—The 3.5 miles of new track laid near Lindsay, Ont., in 1906, was a diversion of the main line between Midland and Belleville for the purpose of enabling the company to handle its traffic more safely and expeditiously through the town of Lindsay. The diversion will not appreciably increase the mileage.

Allandale Shops.—Plans are being prepared for car and locomotive repair shops to be built at Allandale, Ont., for the Northern Division, the geographical position of which necessitates repair work being done locally instead of having to send cars and locomotives to Montreal, as at present.

Toronto-Niagara Line.—It is said that negotiations are in progress between the company and the Ontario Government Hydro-Electric Commission respecting the use of electric power by the G.T.R. It is stated that the company is contemplating the adoption of electricity as a motive power on its line between Toronto and Suspension Bridge, as well as on a number of other lines which may be conveniently served with power.

Improvements at London.—The negotiations for the elevation of the tracks and the other improvements contemplated in the city of London, Ont., have been interrupted by the resignation of F. H. McGuigan, Fourth Vice-President, but the London city officials say it is expected that everything will be got in order so that work may be started by the end of the summer.

The elevated track west of the city, which includes a big fill, and a bridge at Cove, has been completed.

Milwaukee Terminals.—The G.T.R has acquired 24½ acres of land at Milwaukee, Wis., on which it is proposed to lay out additional terminal facilities.

London, Eng., Offices.—A site is reported to have been purchased in Trafalgar Square, London, Eng., on which it is proposed to erect a large office building.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Atlantic, Quebec and Western Ry.—We have been advised that during 1906 the 20 miles from Paspebiac to Port Daniel, Que., were completed. Surveys for the line from Port Daniel to Gaspe have been made, and the location plans are nearly ready for submission to the Government. It is anticipated that a contract will be let for additional construction at an early date. J. V. Nimmo is Resident Engineer in charge of the work. (May, pg. 323.)

Bentick Arm and Quesnel Ry.—E. Bloomfield, R. C. Spinks and G. C. Van Horne were incorporated last session of the British Columbia Legislature with power to construct a railway from the confluence of the Rau Shuswap and south fork of the Fraser River, up the valley of the former and over the divide to the headwaters of the Swamp River, along that river valley via Long, Sandy and Cariboo lakes to Keithley Creek, thence down to the shore of Cariboo Lake and the north fork of the Quesnel River to Coquette pass; along the pass to the dam at the outlet of Quesnel Lake, along the Quesnel River to Quesnel Fork and Quesnel, crossing the Fraser River at some convenient point to near Blackwater, along the Blackwater River to Kuskya Lake, and following the Uhlgako, Salmon and Bella Coola Rivers to Bella Coola. The capital stock is fixed at $3,000,000, bonds to the extent of $25,000 a mile may be issued, and the company is empowered to make agreements of various kinds with other companies.

Central Ontario Ry.—The location plans of the extension from mileage 18½, near Bancroft, to Whitney, Ont., have been approved by the Board of Railway Commissioners. Construction is being pushed from Bancroft towards Whitney, and it is expected to have the first 20 miles of the extension opened for traffic during the summer.

East Kootenay Logging Ry.—A company with this title was incorporated at the last session of the British Columbia Legislature, the provisional directors being A. Leitch and W. F. Gurd, Cranbrook, B.C. The company is authorized to construct a railway from the C.P.R. Crow's Nest Pass branch on lot 5808, group one, to a point southerly of Rock Creek, 15 miles; to the International boundary on the Kootenay River, thence along Gold Creek northerly through lots 324, 314, 325, 313, 312 and 311, and intervening or adjacent lands. Also from about four miles east of Fort Steele Junction on the C.P.R. Crow's Nest Pass branch westerly for five miles, with branches north and south not exceeding three miles; and northerly on the northeasterly side of the C.N.P. branch of the C.P.R. not exceeding three miles. Also from between Low and Swansea sidings of the C.N.P. branch to one or more points distant not more than 10 miles easterly from the point of commencement; and a line following the course of the Upper Moyie River to a point six miles west of the easterly limit of lot 4592, group one. The capital stock is $150,000, and the company may issue bonds to the extent of $20,000 a mile. It may construct telegraph and telephone lines and enter into agreements of various kinds with other transportation companies. (May, pg. 323.)

Great Northern Ry., U.S.—The lines which have been constructed from the International boundary to Brandon, Man., under the title of the Brandon, Saskatchewan and Hudson Bay Ry., and to Portage la Prairie, under the title of the Midland Ry. of Manitoba, were opened for passenger traffic May 13. It is re-

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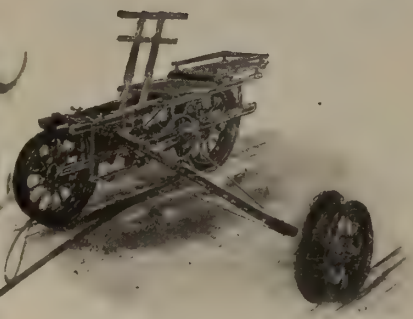

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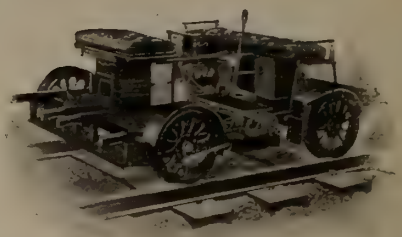
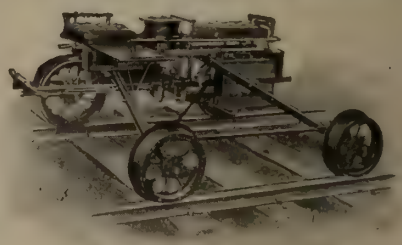
HAND CARS
PUSH CARS
VELOCIPEDE CARS



TRACK TOOLS, SHOVELS

BARRETT JACKS,
RAILROAD BARROWS



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ported that construction will be started at an early date on a line from Portage la Prairie to Winnipeg. In connection with the projected line to connect with the Vancouver, Victoria and Eastern Ry., the Strathcona, Alta., Board of Trade asked the general manager G.N.R., if the line would connect with that town. Mr. Ward replied, May 16, that at present, Strathcona was too far away for the company to consider an extension there.(May, pg. 323.)

International Ry. of New Brunswick.—Tenders have been invited for the St. John river end of the line, commencing at St. Leonard's, N.B. This section will connect with the portion at present under construction from Campbellton, N.B. The extension of the line is all through heavy timbered country and does not strike any town or village It will be principally earth-work, not a great deal of rock, and quite a few bridges of from 20 to 40 ft. spans, which will be steel superstructures on concrete piers. The gradients will not average more than 1%, although in two or three places there will be short gradients of about 3,000 ft. of 1½%, or 79 ft. to the mile. T. Malcolm is general contractor, and D. V. Brown, Chief Engineer. (May, pg. 325.)

Northern Empire Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from the International boundary near Cardston, Alta., northerly through Lethbridge to Fort McMurray, thence in a generally northwesterly direction passing at or near Fort Vermillion, the boundary line between B.C. and Yukon Territory, at or near Lower Port, B.C.; thence generally northwesterly by way of Dawson to the International boundary between Yukon Territory and Alaska. J. B. T. Caron, Ottawa, is solicitor for the applicants.

Nova Scotia Eastern Ry.—The N.S. Government has sent out three survey parties to locate routes for this projected line. L. Whitman, of Annapolis, N.S., is working from Dartmouth to Cole Harbor, to Lawrencetown, Musquodoboit Harbor and up the Musquodoboit River valley. J. J. Taylor, of Truro, has charge of a party working from Guysboro along the Salmon River valley to Cross Roads, Country Harbor. W. A. Hendry, of Halifax, is examining the various routes, starting at Sunny Brae. He will proceed down the St. Mary's River valley and connect with the second party's survey. The whole work is under the direction of R. McColl, Provincial Engineer, and is expected to be completed during the summer.

Ottawa Terminals Ry.—An act incorporating a company with this title has been passed by the Dominion Parliament. The object of the company, which is a subsidiary of the G.T.R. is to take over the agreements made between the G.T.R., the city, the Dominion Government and others respecting the erection of a central station in Ottawa. Under the act all railways entering Ottawa will be enabled to get in together and arrange for accommodation for each of them. The Ottawa City Council has been authorized by an act passed at the recent session to grant a fixed assessment of $150,000 for the station, and $500,000 for the hotel, which it is proposed to erect in conjunction with the station.

W. Wainwright, General Assistant and Comptroller, G.T.R., stated recently that organization of this company would be proceeded with at once, that plans for the new Union Station would be filed by July 15, and that construction would be commenced within six months. (Mar., pg. 161.)

Portland Canal Ry.—By an act passed last session of the British Columbia Legislature, C. H. Dickie, Duncan, B.C., was given an act incorporating a company with this title for the purpose of constructing a railway from near the head of Portland Canal, following the valley of the Bear River for 30 miles, and branch lines not exceeding 15 miles long in any one case. Branch lines are to be constructed along the Glacier, American and Bitter Creeks, but other branch lines are not specifically mentioned. The company may establish permanent tracks for collecting and distributing yards on the main line or any branch or branches. The capital stock is $1,000,000, and bonds to the extent of $30,000 a mile if the standard gauge is adopted, or $20,000 a mile if the line be constructed as a narrow gauge one. Construction is to be commenced by Dec. 31, 1908, and the company may amalgamate or make traffic and other agreements with other transportation companies.

Prince Edward Island Bridge.—It has been announced from Ottawa that the Deputy Minister of Railways has prepared a report favoring the construction of a bridge across Northumberland Strait, connecting P.E.I. and the mainland. The project is not regarded favorably by people on the Island, as it is stated that a bridge, which would be 7½ miles long, would not be practicable, and during a south-east or north-west gale traffic would be impossible, while in winter the bridge would be in danger of being swept away by ice.

Quebec Bridge and Ry. Co.—The Dominion Parliament at its recent session passed an act authorizing the Government to lend the Q.B. and Ry. Co. not exceeding $6,678,200, to bear interest at 3%. It is provided that as large a portion of the sum to be advanced as is required may be applied by the company in payment of debts to banks at present outstanding, on the pledge of bonds of the company previously issued, such bonds being a part of the $6,678,200 authorized to be guaranteed. The remainder of the money will be advanced as the work is proceeded with. Before any money is advanced the company must deposit with the Government all the bonds authorized to be guaranteed, which shall be held as security for the loan.

Quebec Central Ry.—A contract has been let to C. Gordon, Sherbrooke, Que., for about 3 miles of new line which it is proposed to construct between Beauceville and St. Joseph. This piece of line is being constructed in order to do away with the inconvenience caused by the flooding of the present line.

Queen Charlotte Islands Ry.—By an act passed last session of the British Columbia Legislature the time for the construction of this projected railway was extended for a further period. It is provided that the company shall expend $10,000 on surveys and construction before May 1, 1908. The terminal points of the line which the company may construct are mentioned as Skidegate Inlet and Rennell Sound.

Quinze and Blanche River Ry.—Following are the officers and directors for the current year: President, Hon. E. H. Bronson; Vice-President, F. P. Bronson; Secretary-Treasurer, L. Crannell; other directors, H. W. Cole and W. G. Bronson, all of Ottawa, Ont.

Rainy Hollow Ry.—Hon. Sir C. H. Tupper, W. M. Griffin and R. I. B. Warton, of Vancouver, were incorporated by an act passed last session of the British Columbia Legislature, as a company with this title, with power to construct a railway from the boundary line between Alaska and B.C., near the Klehini River (which flows into Lynn Canal), northerly along the valley of that river to the Rainy Hollow copper mines, and branch lines, not exceeding in any one case 20 miles in length. The capital stock is $500,000, and the company may issue bonds to the extent of $25,000 a mile. It has power to promote other companies in connection with its enterprise, and to make agreements of various kinds with other transportation companies. (May, pg. 327.)

St. Mary's and Western Ontario Ry.—A contract for the line from St. Mary's to Embro, Ont., where it will connect with the Tillsonburg, Lake Erie and Pacific Ry., leased to the C.P.R., has been let to J. E. Webb, Toronto. The contract embraces grading, tracklaying, ballasting and telegraph. The work is of a light character and presents no engineering difficulties. Owing to the high land intervening between St. Mary's and Embro there is considerable elevation to overcome, the summit being reached at Lakeside. The gradients on the whole are very favorable, the maximum not exceeding 0.8%. There will be a bridge at the crossing of the Thames at St. Mary's, and one under crossing of the G.T.R. at St. Mary's. The first sod was turned May 14, by the President, Jas. Chalmers. It is expressed that the work will be completed by Dec. 1. The line west of St. Mary's to Exeter and the St. Clair River, at Sarnia, Ont., will hardly be proceeded with this year. J. G. Macklin is Chief Engineer. (March, pg. 163.)

Temiskaming and Northern Ontario Ry.—The Commissioners made an inspection of the line, May 10, and the Minister of Public Works went over the line subsequently. It is expected to have a further 20 miles, from Englehart to Boston, open for traffic by Aug. 1, and that the line will be open to McDougall's Chute, 190 miles, from North Bay, by Oct. 1. This will leave about 60 miles to be constructed to the junction with the G.T. Pacific Ry., and it is expected that this will be completed by the end of 1908. A survey party has commenced work on the location of a branch line from Cobalt to Sudbury. (May, pg. 327.)

Toronto Union Station.—Barclay Parsons is preparing a report on the proposed Union Station for the city, on behalf of the city council. The Mayor and C. B. Smith, consulting engineer, recently discussed the whole matter with Mr. Parsons. (March, pg. 163, and Jan., pg. 7.)

Victoria and Sidney Ry.—Work has been commenced on the re-building of the bridges and culverts along the line from Victoria to Sidney, B.C. The old wooden structures are to be reconstructed with new timbers throughout, and the road-bed is to be ballasted and the wharf at Sidney given a thorough overhauling. F. Van Sant, Superintendent, says that the work will be done in sections so as not to interfere with traffic.

The Supreme Court has affirmed the convictions recorded at Mortlach and Ernfold, Sask., against the C.P.R. for setting the prairie on fire.

The Central Vermont Ry. Passenger Department has issued a well-illustrated book describing the summer resorts in Canada and the U.S. reached by its line.

The New York State Assembly has passed a law making it an offence for a railway company to employ more than 16 hours in any 24, any employe whose duties have to do with the movement of trains.

The C.P.R. is breaking up land in the vicinity of Maple Creek, Sask., for tree planting purposes. The company proposes to plant certain areas along its line with trees in order to ensure a supply of ties, etc., for its own use.

The Michigan State Senate has passed a bill requiring railways in the lower peninsula, whose net earnings exceed $1,200 a mile, to give a passenger rate of 2c. a mile; railways earning less than $1,200 a mile net, can charge 3c. a mile In the upper peninsula the rates are to be reduced to 3c. a mile from 4c.

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C.P.R. Betterments, Construction, Etc.

Construction Programme for 1907.—Sir Thos. G. Shaughnessy recently gave out a statement in regard to the plans for new construction during the current year. This shows 958 miles of new lines, of which 266.64 miles are in Ontario, and 691.36 miles in Manitoba, Saskatchewan and Alberta. Second track work will be gone on with between St. Annes, Que., and Smith's Falls, Ont., 108 miles, and between Fort William, Ont., and Winnipeg, 426.7 miles. Following are the mileages of new construction.

	Miles
From Craighurst to Sudbury, Ont., completing the Toronto-Sudbury line	173.8
From Milverton to Goderich, Ont., completing the Guelph & Goderich Ry.	39.
From Walkerton, Ont., to Proton, Ont., Walkerton & Lucknow Ry.	37.5
From Listowel, Ont., to junction with the Guelph & Goderich Ry. at Linwood	16.34
From Teulon, Man., northward	20.00
Extension of the Pheasant Hills Branch to a junction with the Wetaskiwin Branch, completing a through connection between the Calgary & Edmonton Ry. at Wetaskiwin, Alta., and the main line at Kirkella, Man.	348.
From Lauder, in Southern Manitoba, westward	29.40
From Wolseley, Sask., to Kaiser, completing the Wolseley-Reston Branch	24.2
From Weyburn to Stoughton, in Southern Saskatchewan	37.
From Moosejaw, northward	50.
Extension of Wetaskiwin Branch, eastward	48.5
From Bredenbury on the Manitoba & Northwestern Ry., to Esterhazy, on the Pheasant Hills Branch	20.
From Sheho, Sask., on the Manitoba & Northwestern Ry., northwest to a junction with the Pheasant Hills Branch	82.89
From Lethbridge to Macleod—change of line	31.37

Sherbrooke, Que.—At the annual meeting of the British American Land Co., held in London, Eng., recently, the commissioner reported that the C.P.R. had recently completed surveys for a proposed new line from Lennoxville to Lake Megantic, and in the event of its construction being decided upon it was expected that the Land Co. would make a satisfactory sale of some of its property in Sherbrooke for station, sidings, works and so on. We were advised April 16 that there is no new line construction at Sherbrooke.

Place Viger Improvements.—It is stated in real estate circles in Montreal that the C.P.R. has purchased or has under option the whole area bounded by Papineau Ave. on the east, Place Viger station on the west, Notre Dame st. on the south, and Craig st. on the north, while for a considerable distance the property has been secured right down to the harbor front between Notre Dame st. and the river.

East End Cattle Market, Montreal.—A letter was read at the Montreal City Council market committee recently, offering to lease the east end cattle market for a term of years. The C.P.R. offered to make the necessary expenditures upon improving the accommodation at the market. The company asks for a 99 year lease, at $3,000 a year, but on the suggestion of the City Council is considering the question of purchasing the site.

Smith's Falls, Ont., Improvements.—The C.P.R. intends as soon as accommodation can be provided at Smith's Falls, Ont., to make that point the easterly terminal of the Chalk River section, so far as freight traffic is concerned. It is not proposed to abandon the shops at Carleton Place, and to build others at Smith's Falls, as press reports stated in connection with the proposed change. The change affects only the train and engine service, and the men who are employed in the handling of freight traffic between Smith's Falls and Chalk River.

Georgian Bay and Seaboard Ry.—A contract has been let to the Toronto Construction Co. for the construction of a section of this projected line from Victoria Harbor, to Coldwater, Ont., where a junction will be effected with the Toronto-Sudbury line. The contract covers the entire construction of the line, the ties, rails, etc., being supplied by the C.P.R. This piece of line, J. W. Leonard, Assistant General Manager, Montreal, stated recently, is all that it is proposed to construct at present. The line which the company is authorized to construct may extend from Victoria Harbor to some point on the Toronto-Montreal line, between Peterborough and Sharbot Lake, and surveys have been made of several possible routes.

Toronto Jct. to Bolton.—The portion of the old Toronto, Grey and Bruce Ry. between Toronto Junction and Bolton, Ont., 23 miles, is being practically reconstructed. The gradients are being reduced, some of the curvature taken out, and 80 lb. rails will be laid. This work is being done in connection with the approaching completion of the company's line through Parry Sound to Sudbury, Ont.

Guelph and Goderich Ry.—D. McNicoll, Vice-President, and other C.P.R. officials, went over the entire line to Goderich by special train, May 11.

Port Arthur Station.—The total length of the station building and covered platform at the proposed new station at Port Arthur, Ont., will be 362½ ft., the main building having a frontage of 99½ ft. In the basement the only excavated portion will be a boiler room 24 by 22 ft., with an annex 10 by 10 ft., and a stairway. On the platform level, the entrance from the town will be in the centre of the building, into the general waiting room, 46 by 23 ft., and immediately opposite the entrance will be the ticket office, which will have an outlook on to the platform by a large bay window. On the right hand side of the general waiting room will be the men's waiting room and on the left hand side the women's waiting room, each 24 ft. 9 in. by 22 ft. 8 in. There are toilet rooms off each waiting room. The tower is 16 by 20 ft., but will not be finished in the interior at present. On either side of the main building is a covered shelter, 16 ft. wide, the roof being carried on pillars spaced 12 ft. centers. At the end of the shelter to the left of the main building is another building in which is located the baggage room, 56 by 36 ft., and the express room 24 by 36 ft.

Port Arthur Yards, etc.—A. Price, General Superintendent Central Division, and J. G. Taylor, Superintendent Fort William Terminals, have been in consultation with the civic authorities at Port Arthur, Ont., in connection with projected improvements of the company's yards there. Mr. Taylor said the company had only about one-third of the yard room at Port Arthur that was necessary for the proper handling of the company's business there. An expenditure of $100,000 was contemplated during the current year. It is expected that a meeting between the Port Arthur and Fort William municipal councils, and W. Whyte, Second Vice-President, will be arranged at an early date to complete the settlement of a number of questions connected with trackage rights, etc., in which the C.P.R., the Canadian Northern Ry., and the G.T. Pacific Ry. are interested.

Electrical Development, Fort William-Winnipeg.—For some time past representatives of electrical manufacturing concerns have been going over the line between Fort William and Winnipeg, and investigating the water powers adjacent to the line at Fort William, Kenora and other points. Local reports state that it is considered likely that the company is looking forward to the utilization of electricity as a motive power on some sections of the line, if not the whole mileage, between these points.

Kenora Roundhouse.—We are advised that it is proposed to construct a 30-stall circular locomotive house at Kenora, Ont. The building will be 90 ft. in length.

Winnipeg Train Shed.—It was expected that the train shed over the tracks at the new Winnipeg station would be completed in May.

Winnipeg Shops.—The plans for the enlargement of the car shops at Winnipeg have been approved by the President, and construction will be gone on with during the year. The buildings will have concrete and brick walls, and mill construction for floors and roofs. Following are the dimensions of the existing shops with the dimensions and capacity of the proposed extensions:

Passenger car shop—The present car shop is 240 by 100, and a new one of similar dimensions will be constructed for the repair of coaches.

Pattern storage and pattern shop.—This will be a new two-story building, 100 by 25 ft.

Freight car shop.—The present shop is 313 by 100 ft., and it is proposed to construct an addition on the north side of the building 300 by 18 ft.

Tender and wheel shop.—This will be a new building. The work on tenders and wheels is at present done in the locomotive machine shop, but by the construction of the new building it will be possible to increase the output of locomotives in the present shop by 50%.

Foundry.—The present building is 120 by 90 ft., and the new building will be 100 by 90 ft.

Power house.—The present building is 100 by 100 ft., and the addition will be 100 by 50 ft., having a capacity for six extra boilers, each 250 h.p.

Lunch building.—For the accommodation of the employes a new lunch building 300 by 20 ft. will be provided.

It will be necessary to lay about 8,000 ft. of additional track to serve the new buildings.

Winnipeg Beach Branch.—The line from Winnipeg to Winnipeg Beach is to be relaid during the year with 80 lb. steel and material is being distributed for the work.

Brandon Improvements. — Orders have been received for the construction of a new machine shop in connection with the present roundhouse at Brandon, Man. It will be 200 ft. long, and will be built of brick on a concrete foundation. The water supply plant at the station will also be improved and increased.

Sheho Extension.—A contract is reported let to J. G. Hargreaves, Winnipeg, for 60 miles of grading on the extension from Sheho towards Saskatoon, Sask.

Moose Jaw Hotel.—We have been advised that at present nothing definite can be said about the proposal to erect a larger hotel at Moose Jaw, Sask.

Moose Jaw Shops, etc.—Tenders are under consideration for the erection of an addition to the blacksmith shop at the Moose Jaw, Sask., shops, 66 by 100 ft.

Plans have been prepared for the erection of a new hotel at this point, to cost $175,000. It is stated that when the new building is completed the present hotel will be utilized as offices.

A letter has been received by the city council asking it to fix its price on 15 acres of land lying west of the company's north branch line, as it was desired to obtain the same for yard extension purposes.

Calgary Station.—The plans for the proposed new station at Calgary, Alta., are being prepared by the company's architect at Montreal, and will have to be finally approved of by the Second Vice-President at Winnipeg, before tenders are invited.

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Gradient Reduction at Field, B.C.—"The Big Hill" at Field, B.C., has an eastbound gradient of 237 ft. to the mile. It is proposed to reduce this to 116 ft. to the mile, which will then be the maximum gradient on the main line on eastbound traffic. We were advised April 17 that it had not been definitely decided whether or not this work would be gone on with during this year.

Nicola, Kamloops and Similkameen Ry.—A train service between the junction with the C.P.R. at Spence's Bridge and Nicola, B.C., 47 miles, was put in operation early in April. The construction of the line from Nicola Lake will be proceeded with early in May.

Esquimalt and Nanaimo Ry.—The surveys now in progress are for the proposed extension from Wellington to the Alberni canal, and instructions have been given that the clearing of the right of way is to be proceeded with following the completion of the surveys. The distance between Wellington and Alberni is about 52 miles. The line will branch off from the east coast at about French Creek. The engineers in charge of the parties are H. H. Brown, who is working between Wellington and French Creek, and —. Shepherd, who is working between French Creek and Alberni.

During the summer of 1906 the company had two parties in the field for the purpose of reporting on the unexplored section of Vancouver Island, where the E. and N.R. has timber lands. Owing to the large area to be covered the reports were unsatisfactory. Four parties are being sent out during the current season.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—A contract is reported let to Foley Bros., St. Paul, Minn., for the construction of a line from Brooten to Duluth, Minn. It is said the line will be 180 miles long, and that it will have a maximum gradient of 5%, and a maximum curvature of 30. The line will cross the Great Northern Ry. and the Northern Pacific Ry. at a number of points.

The Department of Marine will order a gasoline propelled lifeboat for service on the west coast of Vancouver Island. It has not been decided where the lifeboat will be built.

The railways constituting the Western Trunk Lines, the Central Traffic Association and the Eastern Trunk Lines filed with the Interstate Commerce Commission tariffs increasing their rates on eastbound grain and grain products, to come into effect April 1. This date was subsequently altered to May 1. The rates generally show an increase of 2c. per 100 lbs. for grain and grain products from western points to New York.

During 1906 the C.P.R. carried over 6,500,000 pieces of baggage, an increase of about 1,000,000 over 1905. There was an increase of 56 in the number of corpses carried, the number transported in 1906 being 1,256. The classification shows that there was a decrease of over 800 in the number of bicycles carried, a decrease of 1,300 in baby carriages; an increase of 65,000 cans of milk, and an increase of 600 dogs carried in 1906 over 1905.

By an amendment to the Railway Act passed last session of the Dominion Parliament, the Board of Railway Commissioners is authorized to employ counsel to conduct or argue any question in the public interest if it appears to be necessary. The act also makes some small amendments to the provisions relating to the deposit of mortgages to secure bonds, and adds a section providing that the purchaser of a defaulting railway shall at the next session of Parliament apply for an act giving authority to hold and operate the railway so purchased.

Railway Rolling Stock Notes.

The Quebec and Lake St. John Ry. is in the market for a couple of locomotives.

The Canadian Locomotive Co., Kingston, Ont., has recently made delivery of five 10-wheel locomotives to the Canadian Northern Ry.

The Canadian Northern Ry. has received 100 flat cars from the Crossen Car Manufacturing Co., Cobourg, Ont., and has ordered 100 flat cars from the same company.

The Intercolonial Ry., between April 18 and May 16, received six consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont., and 126 hopper cars, 30,000 lbs. capacity, from Rhodes, Curry & Co., Amherst, N.S.

M. P. and J. T. Davis, who have a contract on the Quebec section of the Eastern Division National Transcontinental Ry., have ordered 20 improved Hart convertible ballast cars, 34 ft. long, 80,000 lbs. capacity, from the Dominion Dump Car Co., Montreal.

The C.P.R. between April 14 and May 11 ordered the following rolling stock: 46 box cars, 14 flat cars, one baggage and smoking car, one baggage and express car, and one baggage car at its Angus, Montreal, shops; and six vans at its Farnham, Que., shops.

The Intercolonial Ry., between April 18 and May 16, ordered the following rolling stock: 100 platform cars, 80,000 lbs. capacity, two baggage and express cars, from Rhodes, Curry & Co., Amherst, N.S.; 34 stock cars from the Canada Car Co., Montreal.

It was stated in the House of Commons by the Acting Minister of Railways, before the closing of last session, that there were 2,246 cars belonging to the Intercolonial Ry., on railways in the United States. Every endeavor was being made to trace the cars and have them brought back.

The Atlantic, Quebec and Western Ry. at present has on its line two locomotives, eight flat cars, two box cars, 10 ballast cars, one snow plow and one ballast unloader. The company expects to be in the market for additional cars, and a steam shovel, but has not definitely decided as to its requirements.

The C.P.R. between April 14 and May 11 received the following rolling stock: 12 locomotives from the American Locomotive Co.'s Richmond works; three locomotives, four sleeping cars, seven first-class cars, 11 baggage and smoking cars, 15 mail and express cars, 284 box cars, 388 flat cars, and 118 steel coal cars from its Angus, Montreal, shops; and five vans from its Farnham, Que., shops.

The G.T. Pacific Ry. has placed an order with Rhodes, Curry & Co., Amherst, N.S., for 2,500 box cars, 60,000 lbs. capacity, to be delivered at the rate of 500 a year. Construction of the first 500 is being proceeded with. The specifications provide: length over end sills, 36 ft. 9¾ in.; width over side sills, 9 ft. 0¾ in.; height from rail to top of running board, 13 ft. 4 in. Simplex bolsters and brake beams.

The G.T.R. assembled at Montreal and dispatched to the G.T. Pacific Ry. at Winnipeg, and westward, between April 26 and May 1, the following rolling stock for construction work: 25 locomotives, 500 ballast cars, 1,000 flat cars, and 10 steam shovels, in addition to a number of store, sleeping and kitchen cars. The cars were sent out in complete trains, and went to Winnipeg over the C.P.R., as well as over the G.T.R. and its U.S. connections.

The G.T.R. has completed at its Point St. Charles, Montreal, shops, five new first-class passenger cars, 75 ft. 5 in. long, and weighing 106,000 lbs. each. The main section of each car will seat 60 persons and the smoking-room 12. The seats in the main body of the car are of the high swing-back pattern, upholstered in green plush, and the smoking-room seats are upholstered in leather. These coaches are for use in the Montreal-Chicago trains.

The Canadian Northern Ry., between April 15 and May 15, received the following rolling stock: Three 10-wheel locomotives from the Canadian Locomotive Co., Kingston, Ont.; two 10-wheel locomotives from the Locomotive and Machine Co., of Montreal; two first-class passenger coaches, six baggage cars, from Rhodes, Curry & Co., Amherst, N.S.; 50 flat cars from the Crossen Car Manufacturing Co., Cobourg, Ont.; 100 Hart convertible cars from the Canada Car Co., Montreal; and four first-class passenger coaches from the U.S.

The specifications for the 10 sleeping cars which the C.P.R. is having built at its Angus, Montreal, shops, provide for: length, 72 ft. over frame; width, 9 ft. 10½ in. over frame; capacity, 12 sections, smoking room and stateroom; body and underframe, wood; axles, 5 by 9 in., M.C.B.; bolsters, double; brake beams, Simplex with adjustable heads; brakes, Westinghouse air; brasses, 5 by 9 in., M.C.B.; couplers, Tower passenger; heating system, Gold with Frumveller heater; journal boxes, M.C.B. standard; roofs, standard passenger, covered with canvas; springs, 38 in., double elliptic; trucks, six-wheel, 5 by 9 in.; wheels, 36¼ in. steel tyred.

Following are some of the dimensions, etc., of the 50 box baggage cars which the C.P.R. is having built at its Angus, Montreal, shops: length, 36 ft. 8 in.; width, 9 ft. 0⅝ in., over frames; body and underframe, wood; axles, 5 by 9 in., M.C.B.; bolsters and brake beams, Simplex; brakes, Westinghouse air; brasses, 5 by 9 in., M.C.B.; couplers, Tower freight; trucks, all steel, diamond pattern; wheels, 34 in., steel tyred. These cars are being built after the general type of a box car, but with side doors of the refrigerator car type, and with steel-tyred wheels, with steam pipe and air signal pipe underneath car in order that they may be run in passenger service.

The C.P.R. is having built at its Farnham, Que., shops, 13 vans, 29 ft. by 9 ft. over frames. A point about these vans is that the centre and intermediate sills are carried out to the buffer beam and form the timbers for supporting the platform. This form of construction was adopted in order to adapt the vans to the heavy service which is required by them when a pusher is used at the end of the train in ascending gradients, etc. The specifications provide: body and underframe, wood; axles, 3¾ by 7 in., M.C.B.; bolsters, 6 in. plate with flat side bearings; brakes, Westinghouse air; brasses, 3¾ by 7 in., M.C.B.; couplers, Tower; heated by stove: wheels, 33 in., cast iron.

The Canadian Northern Ry. was reported to be negotiating in the U.S., April 30, for 15 second-hand 10-wheel locomotives for delivery by June 1. D. D. Mann stated in Winnipeg, Man., the same date, that the company had 140 locomotives on order for delivery this year and early in 1908, as follows: The Canadian Locomotive Co., Kingston, are under contract to deliver 55 locomotives at the following dates: 15 in ten weeks from April 25, 15 in nine weeks from Aug. 1, 25 during Mar., April and May, 1908. The Locomotive & Machine Co. of Montreal, 45 locomotives at the following dates: 10 in three weeks from April 29, 15 in four weeks from Sept. 15, 20 in five weeks from Dec. 1. The Canada Foundry Co., Toronto, 40 locomotives at the following dates: Five locomotives per month, beginning June 15, until the whole are delivered.

The Toronto, Hamilton and Buffalo Ry. Co.'s simple locomotive no. 11, built recently

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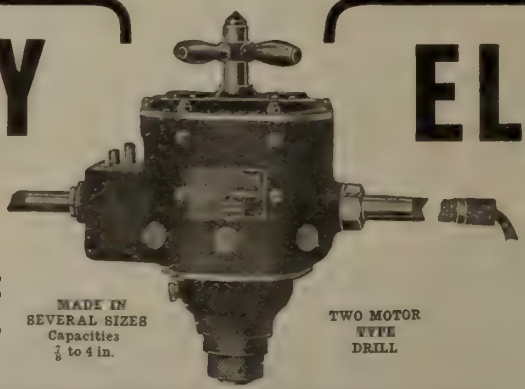

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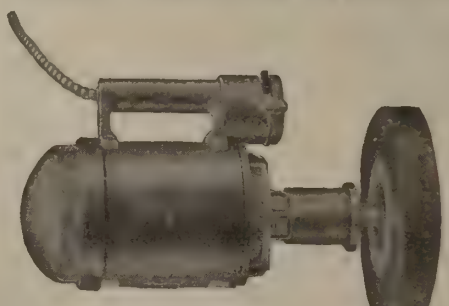

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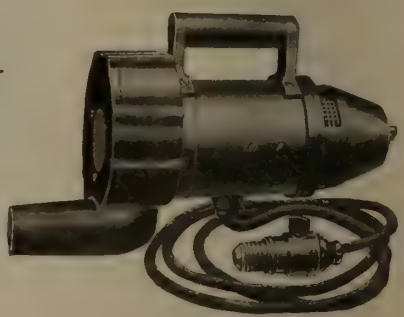

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WRITE FOR CATALOGUE

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CHICAGO PNEUMATIC TOOL CO., CHICAGO—NEW YORK

N. J. Holden Company, Limited, Montreal, General Sales Agents for Canada

by the Locomotive and Machine Co. of Montreal, has the following general dimensions, etc.:

WHEELS.—Diameter of drivers, 73 inches.
WEIGHT.—In working order, total, 292,000 lbs.; on drivers, 182,000 lbs.
CYLINDERS.—Size, 20 x 26 ins.
VALVE MOTION.—Walschaert.
BOILER.—Type, extended wagon top; working pressure, 200 lbs.; diameter at smallest ring, 66¼ ins.
FIREBOX.—Length, 102 ins.; width, 65¾ ins.
TUBES.—Number, 336; diameter, 2 ins.; length, 15 ft. 0¼ ins.
HEATING SURFACE.—In sq. ft., tubes, 2,632; firebox, 160; total, 2,792.
GRATE SURFACE.—Sq. ft., 46.
TENDER.—Style, U shape, gravity sides; Truck, 2, 4 wheel centre bearing.
CAPACITY.—Water, 5,500 gals.; coal, nine tons.
COUPLERS.—Tower.
HEADLIGHTS.—18 ins. round.
BRAKES.—Westinghouse.
BLOW-OFF VALVES.—American Locomotive Co.
DRIVING WHEEL CENTRES.—Cast steel, 66 ins.

Railway Finance, Meetings, etc.

Atlantic and Lake Superior Rd.—The petition to the Exchequer Court for the confirmation of a scheme of arrangement between the company and its creditors, and between the Baie des Chaleurs Ry. and its creditors, will be heard in the Exchequer Court, Ottawa, June 10. All opposition to the proposed arrangements was required to be filed by May 31. The scheme of arrangement in each case provides for the handing over of the existing £500,000 Atlantic and Lake Superior Ry. bonds, and £409,400 of Baie des Chaleurs Ry. bonds to the Royal Trust Co., Montreal, and the issue by that company of certificates of participation in certain proportions of preferred, ordinary and deferred, among the several parties entitled thereto. The income from the bonds surrendered will be administered by a committee of seven and distributed as provided among the different certificates. The bondholders who do not transfer their bonds to the Trust Company shall remain creditors to the extent of principal and interest, but will rank only as unsecured creditors. The principal bondholder is the banking house of Galindez Bros., London, Eng., and in answer to a question in the Court May 9, J. Galindez said the unsecured creditors could get nothing at present, and could not be in any worse position under the proposed arrangement; they might perhaps be in a better condition.

Baie des Chaleurs Ry.—See Atlantic and Lake Superior Ry.

The Canadian Pacific Ry. Co. has decided to abolish the minimum charge of 2s. 6d. transmission fee with a view to encourage small investments, which has become a feature of the London, Eng., market. Shares may now be sent in to the company's office at 62-65 Charing Cross, for remittance to New York for transference into the buyers' names at a charge of 2d. per share. The insurance against loss of certificates, for which New York used to charge 2s. 6d.% of value for the single trip from New York to London, the company now undertakes to cover both the outward and return journeys for 1s. 6d.%, and the single journey for 1s.%.

Central Ontario Ry.—At the adjourned annual meeting at Trenton, Ont., May 18, the shareholders authorized a new issue of bonds amounting to $1,200,000 to retire the old bonds now past due. It was also decided to increase the capital stock from $750,000 to $3,340,000. Following are the officers and directors for the current year: President, S. J. Ritchie, Akron, Ohio; Vice-President, C. E. Ritchie, Akron, Ohio; Manager and Secretary, Geo. Collins, Trenton, Ont.; other directors: T. M. Kirkwood, Toronto; S. S. Lazier, Belleville, Ont.; W. S. Jaques, J. H. Stewart, R. Fraser, Trenton, Ont.; Treasurer, J. D. Rowe, Trenton, Ont.

Detroit River Tunnel Co.—The mortgage deed dated April 1, made by this company to the Guaranty Trust Co., of New York, securing bonds to an amount not exceeding $15,000,000, has been deposited with the Secretary of State at Ottawa.

At the annual meeting in Detroit, May 2, the following were elected directors: W. K. and F.W. Vanderbilt, C.M. Depew, S.F. Barger, W. H. Newman, H. McK. Twombly, H. B. Ledyard, N. Kingsmill, W. P. Torrance, H. Russel and C. F. Cox. The company does not issue an annual report.

Dominion Atlantic Ry.—Gross earnings for Mar., $73,400, against $63,703 for Mar., 1906, making for three months ended Mar. 31, $201,400 against $181,103 for same period, 1906.

Press reports state that the New York, New Haven and Hartford Ry. is negotiating for the purchase of the line, but officials of the company give the report little credence.

Grand Trunk Ry.—Press reports that the Wabash Rd. has purchased the G.T. Air Line between Glencoe and Fort Erie, Ont., were denied by R. S. Logan, Assistant to the Second Vice-President and General Manager, May 16. He stated that the lease of running rights which the G.T.R. gave to the Wabash Rd. of the line in question, has several years more to run.

Lake Erie and Detroit River Ry.—There was not a quorum of stockholders present May 7, the day fixed for the holding of the annual meeting. The report dealing with the finances of the company is incorporated in that of the Pere Marquette Rd. Following are the directors and officers: President, Judson Harmon, Cincinnati, Ohio; Vice-President, G. W. Perkins, New York City; F. H. Walker, A. Leslie, Walkerville, Ont.; A. H. Skirving, Chatham, Ont.; Secretary, T. J. Walsh; Treasurer, J. E. Howard, Cincinnati, Ohio.

Montreal and Vermont Junction Ry.—Following are the officers and directors for the current year: President, C. M. Hays; Vice-President, E. H. Fitzhugh; Secretary-Treasurer, A. H. Gilmour; Assistant Secretary-Treasurer, W. H. Chaffee; other directors: G. C. Jones, E. C. Smith, C. U. Witters; Auditor, W. G. Crabb. The President, Vice-President and G. C. Jones are managing directors. The company does not publish an annual report, the railway being operated as part of the Central Vermont Ry.

New Brunswick Southern Rd.—Lieut.-Col. H. H. McLean stated May 16, that while the line might have been purchased by the C.P.R. without his knowing it, he did not think a sale had been made. During the previous week officials of the Maine Central Rd. had been inspecting the line, and on the previous day he had received instructions from the Russell Sage office in New York authorizing the re-election of the present directorate and board of management at the annual meeting.

Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.—It was announced recently that the receipts issued by the bondholders' committee in respect of the 6% first mortgage bonds and the deferred interest certificates already deposited with the committee for the purpose of conversion into the company's guaranteed 4% mortgage debenture stock had to be lodged at the Canadian Northern Railway Co.'s offices in London, Eng., by June 1.

Quebec and Lake St. John Ry.—Receipts for Mar , $47,139, against $36,314 for Mar., 1906; making for three months ended Mar. 31, $116,962, against $90,603 for same period, 1906.

Quebec Central Ry.—Gross earnings for Mar., $71,371.65; net earnings, $23,126.08; against $76,077.76 gross and $29.424 net for Mar., 1906. Net earnings for three months ended Mar. 31, $39,687, against $66,432.10 for same period, 1906.

St. Lawrence and Adirondack Ry.—Net income for Mar., $27,182, against $26,549 for Mar., 1906.

Temiscouata Ry.—Traffic receipts for Mar., $14,364.42, against $16,043.87 for Mar., 1906.

Temiskaming and Northern Ontario Ry.—Traffic returns for the last week in April show 12,579 passengers carried against 7,894 in the corresponding week of 1906. The passenger receipts showed an increase of $3,669.62, and the freight receipts an increase of $2.645.-42 for the last week in April over those for the corresponding week of 1906.

Toronto, Hamilton and Buffalo Ry.—Earnings for April $82,852.87, against $61,146.14 for April, 1906.

Railway Commissioners' Report.

The Board of Railway Commissioners has issued its first report covering a period of 26 months from Feb. 1, 1904, to Mar. 31, 1906. The introduction contains information as to the creation of the Commission; its jurisdiction and general powers; its practice and procedure; the 114 public sittings held in various parts of the Dominion; the judgments delivered, and the organization of the records, traffic, engineering and accident branches. In the appendices are given in full the rules and regulations as to proceedings before the Board; a list of applications heard at the public sittings held during the period covered by it; a summary of the principal judgments delivered; report of the Chief Traffic Officer, as to tariffs filed, and traffic orders made; a list of examinations and inspections made by the engineering branch, the report of the Inspector of Accidents, and the order of the Board as to Car Service Rules. These orders cover the period of the Commission's work to Mar. 31, 1906, only. THE RAILWAY AND MARINE WORLD publishes monthly a list of the orders issued during the preceding month, and also publishes in full, the more important orders as to freight and passenger rates, etc. On Mar. 31, 1906, the staff of the Board comprised the following:

NAME.	OFFICE.	Salary per ann.
G. A. Mountain	Engineer	$4,800
J. Hardwell	Traffic Expert	3,500
A. G. Blair, Jr.	Law Clerk	2,500
E. C. Lalonde	Insp. of Acc	2,200
J. E. Duval	Insp. of Acc	2,200
C. A. Brown	Ch. Clk. Traff. Dept.	2,000
E. A. Primeau	Reg. and Acct	1,800
T. L. Simmons	Engineer	1,800
J. H. Tessier	Engineer	1,800
R. Richardson	Priv. Secy. to Ch. Com.	1,500
C. E. McMannus	Clk. Traffic Dept.	1,000
J. W. Thomson	Ch. Clk. Records Dept.	1,000
N. Ham	Clk. Traffic Dept.	900
H. W Messinger	Clk. Traffic Dept.	900
F. C. McGee	Clk. Record Dept.	800
C. S. Huband	Clk. Record Dept.	800
B. Chevrier	Clk. and Sten.	800
G. T. Riddell	Clk. Traffic Dept.	720
T. Chandler	Court Usher	700
L. J. Lewis	Clk. and Sten.	600
L. M. Cameron	Clk. and Sten.	600
R. Larose	Clk. and Sten.	550
J. Arbick	Messenger	510
D. Tangelier	Messenger	500
G. Taylor	Cook on Official Car	720

J. E. Duval resigned after the date of the report. The Secretary, A. D. Cartwright, is not included in the above list. His salary is fixed by the Governor-in-Council, the Railway Act providing that it shall not exceed $4,000 a year.

The Department of Marine has under preparation plans and specifications for the proposed cruiser for service on the Pacific Coast.

The passenger service between St. Paul, Minn., and Spokane, Wash., over the Minneapolis, St. Paul and Sault Ste. Marie Ry. to Portal, Sask.; the C.P.R. from Portal to the International boundary via Yahk, B.C., and the Spokane International Rd., will be placed in operation June 15.

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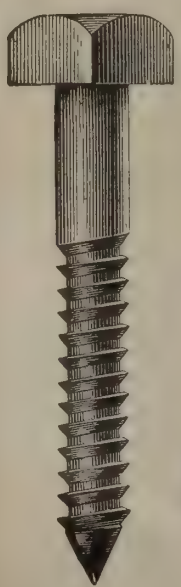

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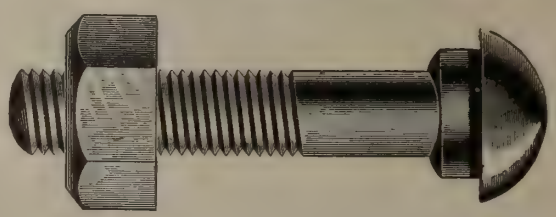

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TRANSPORTATION APPOINTMENTS.

Algoma Central and Hudson Bay Ry.—The position of Chief Engineer had not been filled May 20, but we have been advised that an appointment will be made in the near future. Mr. Wilde has resigned the position of Chief Engineer, Algoma Commercial Co., in charge of the land grant and other property. This position has been abolished and the duties will in future be discharged by the Chief Engineer of the A. C. and H. B. Ry.

Board of Railway Commissioners.—Jas. Clarke, heretofore conductor Ottawa Division G.T.R., has been appointed Inspector of Accidents, with headquarters at Winnipeg, Man.

Boston and Albany Rd.—W. J. Fripp, heretofore Assistant General Superintendent at Boston Mass., has been appointed General Superintendent there, succeeding J. B. Stewart, resigned. The position of Assistant General Superintendent has been abolished.

Canadian Northern Quebec Ry.—F. Shaw, heretofore city freight agent, Montreal, has been appointed commercial agent there.

Allan Macdonald has been appointed contracting freight agent at Montreal, a new position.

Canadian Northern Ry.—E. A. James, Manager, has been granted extended leave of absence due to ill-health. It is understood that he will not return to active service with this company.

D. B. Hanna, in addition to his duties as Third Vice-President, has assumed the duties, temporarily, of General Manager.

F. A. Folger, heretofore General Superintendent, Kingston and Pembroke Ry., was reported recently to have been appointed Superintendent C.N.R., with office at Winnipeg. We were officially advised, May 11, that the position which Mr. Folger will occupy in the C.N. Ry. service, had not then been determined.

J. B. Sheppard, heretofore in the C.P.R. local freight department, Toronto, has been appointed contracting freight agent, C.N.R. & C.N.O.R., at Toronto.

Canadian Pacific Ry.—E. Laforest, heretofore storekeeper at Quebec, has been transferred to headquarters at Montreal as assistant foreman in the iron storehouse, and is succeeded as storekeeper at Quebec by J. O. Dewar.

J. H. Mills, heretofore road foreman of locomotives, has been appointed District Master Mechanic, districts 1 and 2, Eastern Division. Headquarters, Montreal

W. G. Rankin is reported to have been appointed Claims Agent (personal injury, etc.) at Montreal. He has heretofore been in the Illinois Central Rd. service at Chicago.

In our May issue, among the C.P.R. appointments it was stated that F. L. Lamplough had been appointed Trainmaster at Ottawa, Ont. He is a G.T.R. official, not a C.P.R. one, and his appointment was correctly announced among the G.T.R. appointments in the same issue.

W. Borbridge, heretofore road foreman of locomotives, has been appointed District Master Mechanic, districts 3 and 4, Eastern Division. Headquarters, Ottawa.

J. Coughlin, heretofore roadmaster at White River, Ont., has been appointed roadmaster at Schrieber, Ont., succeeding A. Olson, transferred to the Western Lines.

W. B. Way, heretofore Trainmaster district 2, Lake Superior Division, has been appointed Assistant Superintendent. Office, White River.

L. B. Copland, heretofore roadmaster at Sudbury, Ont., has been appointed roadmaster at White River, Ont., succeeding J. Coughlin, transferred.

G. B. Williams has been appointed Inspector of Refrigerator Car Service for Western Lines, with headquarters at Winnipeg, reporting to the Assistant Superintendent of Car Service. His duties are to inspect and instruct in the matter of handling perishable shipments, and all parties interested in the handling of this class of traffic will be governed by his instructions.

The jurisdiction of the officers of district 2, Pacific Division, has been extended over the Nicola, Kamloops and Similkameen Ry., extending from Spence's Bridge to Nicola, B.C., which is being operated as the Nicola Branch, sub-section 2.

W. Stormont has been appointed roadmaster Shuswap section and the Shuswap and Okanagan branch, succeeding R. Watmore, resigned. Office, Sicamous Jct., B.C.

E. E. Austin, heretofore road foreman of locomotives at Revelstoke, has been appointed District Master Mechanic, district 3, Pacific Division. Office, Nelson, B.C. The position of road foreman of locomotives, district 3, Pacific Division, has been abolished.

The headquarters of S. Phipps, Master Mechanic of the Pacific Division, have been changed from Revelstoke to Vancouver, B.C.

A. Olson has been appointed roadmaster Lethbridge section, Dunmore Jct. to McLeod, Alta., vice G. Sandstrom, transferred.

G. Sandstrom has been appointed roadmaster Cranbrook section, McLeod, Alta., to Elko, B.C. Office, McLeod.

J. Telfer has been appointed roadmaster Sirdar section, having charge of track between Elko and Kootenay Landing, B.C., vice M. Newland, transferred. Office, Cranbrook, B.C.

Delaware and Hudson Rd.—C. S. Sims, heretofore assistant to the President Erie Rd., has been appointed General Manager D. and H. Rd., in charge of transportation matters. Office, Albany, N.Y.

Grand Trunk Pacific Ry.—M. C. Sturtevant, having resigned to go into private business, the office of General Assistant at Winnipeg has been abolished. O. O. Winter, the recently appointed General Superintendent there, will have temporary charge of the duties heretofore performed by the General Assistant.

Grand Trunk Ry.—W. G. Brownlee, heretofore Superintendent Middle Division, Toronto, has been appointed General Transportation Manager, in charge of maintenance and operation. Office, Montreal. He reports to the Third Vice-President.

W. H. Towner has been appointed acting general foreman at Toronto shops, vice J. C. Garden, assigned to other duties.

R. J. Cottrell has been appointed acting locomotive foreman at St Thomas, Ont., vice W. H. Towner, transferred.

J. C. Garden has been appointed acting Master Mechanic, Fort Gratiot, Mich., owing to J. T. McGrath's illness.

A. A. Tisdale, heretofore Assistant to the Fourth Vice-President, has been appointed Assistant to General Transportation Manager.

F. Mitchell, heretofore chief clerk to the Master of Bridges and Buildings, Toronto, has been appointed Chief Clerk to the General Transportation Manager.

G. Beckingham, heretofore roadmaster, Point St. Charles, Montreal, has been appointed Acting General Roadmaster, Eastern Division, succeeding D. McCooe, resigned.

E. Dunlop has been appointed roadmaster, district 31, succeeding J. Leslie, appointed General Roadmaster Quebec, Montreal and Southern Ry. Office, Ottawa.

W. Bibley, heretofore roadmaster G.T.R. and Wabash Rd., St. Thomas, Ont., has been appointed General Roadmaster Northern Division, G.T.R., succeeding P. H. McFadden, resigned. Office, Allandale, Ont.

The position of Assistant Trainmaster at Palmerston, Ont., recently held by N. B. Walton, who has resigned, has been abolished.

U. E. Gillen, heretofore Assistant Superintendent at London, Ont., has been appointed Superintendent of the Middle Division, succeeding W. G. Brownlee, promoted. Office, Toronto.

A. J. Nixon, heretofore Trainmaster at Stratford, Ont., has been appointed Assistant Superintendent at London, Ont., succeeding U. E. Gillen, promoted.

C. G. Bowker, heretofore Chief Dispatcher, Stratford, Ont., has been appointed Trainmaster there, succeeding A. J. Nixon, promoted.

H. L. Wilkinson, heretofore section foreman, Windsor, Ont., has been appointed roadmaster Southern Division, succeeding W. Bibley, transferred. Office, St. Thomas, Ont.

The following agents were appointed during April: Washago, Ont., H. F. Parks; Severn, Ont., T. E. Black; Callander, Ont., J. A. Bell; Gobles, Ont., E. H. Webber; Nixon, Ont., F. C. Cassidy; Black Rock, N.Y., Fort Erie, Ont., Bridgeburg, Ont., W. P. Lyon; Alma, Ont., D. Alair; Goldstone, Ont., I. J. Heldman; Pinkerton, Ont., E. E. Prine; St. Polycarpe Jct., Que., J. H. Hebert; Admaston, Ont., Miss E. Boyd. Outside Ticket Agents: Brampton, Ont., R. W. Lowry; St. Mary's, Ont., W. G. Kenny.

Halifax and Southwestern Ry.—G. C. Farish, Assistant Superintendent, is acting as Superintendent pending the appointment of a successor to the late J. D. Sullivan.

Michigan Central Rd.—C. J. Hupp, heretofore Assistant General Freight Agent, Detroit, Mich., has been appointed Industrial Agent, a new office. Headquarters, Detroit, Mich.

C. C. Griggs, heretofore Commercial Agent, Detroit, has been appointed Assistant General Freight Agent there, succeeding C. J. Hupp.

F. N. Davis, heretofore Division Freight Agent Grand Rapids, Mich., has been appointed Commercial Agent at Detroit, succeeding C. C. Griggs.

E. A. Treadway, heretofore travelling freight agent at Detroit, has been appointed Division Freight Agent at Grand Rapids, succeeding F. V. Davis.

J. Greenbaum has been appointed travelling freight agent at Detroit, succeeding E. A Treadway.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—W. H. Schutt is reported to have been appointed Assistant to the General Manager.

New York Central Lines.—B. B. Mitchell, Freight Traffic Manager, Lake Shore and Michigan Southern Rd., Chicago, Ill., has been appointed General Freight Traffic Manager of all N.Y.C. lines east and west of Buffalo, N.Y. Headquarters, Chicago, Ill., and New York City. He succeeds to the duties, but not to the position of the late G. J. Grammer, who had the title of Vice-President.

F. Le Barr, Assistant Freight Traffic Manager, N.Y.C.R., has been appointed Freight Traffic Manager, N.Y.C. lines east of Buffalo, N.Y.

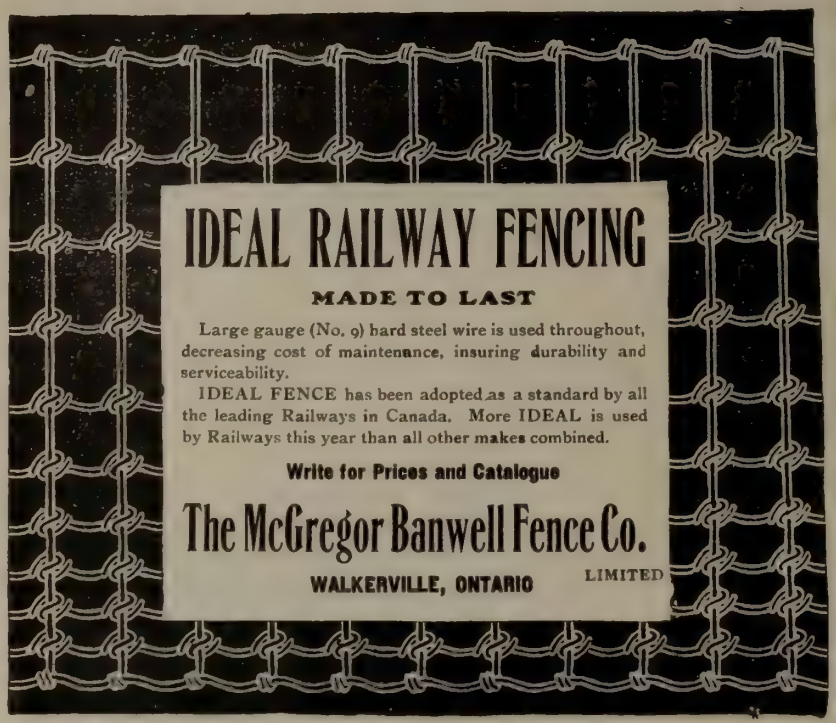
G. H. Daniels, upon his own request, has been relieved of the duties of Manager, General Advertising Department, and will in future perform such duties as may be assigned to him. All correspondence pertaining to advertising should be addressed to the Advertising Department, N.Y.C. Lines, Grand Central Station, New York. We have been advised that no action has been taken with a view to appointing a successor for that particular position; for the present, at least, it will be abrogated.

J. B. Martin, heretofore travelling passenger agent at Watertown, N.Y., has been appointed to a similar position at Buffalo, N.Y., succeeding C. Hartigan, appointed General Agent Passenger Department at Montreal.

Niagara Navigation Co.—J. V. Foy has been appointed chief clerk in the general offices.

H. E. Weller has been appointed City Ticket Agent, Toronto.

* See July/06 vol and other fgs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Coal	B.T.U. per lb. combustible	Ash per cent.	Moisture per cent.
Anthracite	14,700	10 to 20	1 to 5
Semi-anthracite	14,900	10 to 20	1 to 5
Semi-bituminous	15,800	5 to 10	1 to 6
Bituminous—Eastern	15,000	5 to 20	2 to 6
" Western	14,200	8 to 25	6 to 15
Lignitæ	12,200	5 to 20	10 to 30

Coal—Consumption—Varies greatly with different conditions of trains, roads, locomotives, etc. Exact comparisons are impossible unless we know all conditions, which is seldom the case. Tests on several roads running into New York in 1897 give these results: Hard Coal: Average per train mile, 17.3 freight cars, 122 lbs.; average per train mile, 7 passenger cars, 112 lbs.; average per freight car mile, 7.05 lbs.; average per passenger car mile, 16 lbs. Soft Coal—Average per train mile, 18.15 freight cars, 120 lbs.; average per train mile, 7 passenger cars, 110 lbs.; average per freight car mile, 6.06 lbs.; average per passenger car mile, 15.07 lbs.

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R. McGiffen has been appointed Freight Agent.

W. B. Hines has been appointed Baggage Agent.

Northern Navigation Co.—R. Beaumont has been appointed joint travelling passenger agent with the G.T.R. and the N.N. Co. His headquarters will be at the office of the G.T.R. District Passenger Agent, Union Station, Toronto.

C. D. George has been appointed travelling freight agent for the territory Napanee, Ont., and east, succeeding J. Nelligan, resigned. His headquarters will be in the office of the District Freight Agent, G.T.R., Montreal.

Northern Pacific Ry.—C. M. Levey, Third Vice-President, Tacoma, Wash., has been transferred to St. Paul, Minn., and given charge of maintenance and operation of all N. P. lines.

H. J. Horn, heretofore General Manager, has been appointed General Manager in charge of maintenance and operation of lines in Montana, North Dakota, Minnesota and Wisconsin.

H. C. Nutt, heretofore General Superintendent Michigan Central Rd., Detroit, Mich., has been appointed General Manager in charge of maintenance and operation of all N.P.R. lines in Washington, Idaho and Oregon. Office, Tacoma, Wash.

These General Managers will report to the Third Vice-President, St. Paul.

A new division was created May 1, called the Pasco Division, with headquarters at Pasco, Wash. J. L. DeForce, heretofore Trainmaster at Spokane, has been appointed the first Division Superintendent there.

J. C. Poore has been appointed Assistant General Passenger Agent, St. Paul, Minn.

Toronto, Hamilton and Buffalo Ry.—A Hamilton despatch to a Toronto paper stated recently that "Calvin Sinclair had been appointed General Freight and Passenger Agent of the T.H. & B.R. at Brantford." As a matter of fact, Mr. Sinclair has been sent to Brantford to relieve the regular agent, who is ill, and he is now "acting agent."

Wabash Rd.—H. Miller, heretofore General Manager, has been appointed Vice-President. Office, St. Louis, Mo.

A. A. Yonge, heretofore travelling freight agent at Boston, Mass., has been appointed New England freight agent there, succeeding W. P. Sargeant, deceased. He is succeeded as travelling freight agent by C. L. Wilder

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Pere Marquette Rd.—It is understood that negotiations are nearing completion for the discharge of the receivership, which has been in force for a couple of years. The shareholders, it is stated, have offered to raise sufficient money to pay off the obligations incurred since the appointment of the Receiver for the P.M. Rd., and the Cincinnati, Hamilton and Dayton Rd., to which the P.M. Rd. had been leased.

The Master Car Builders' and the Master Mechanics' Associations will meet in Atlantic City, N.J., for the second year in succession during the current month. The first convention will open June 12, and the meetings will be continued until June 19.

In the action of Vallance against the Montreal and Cornwall Navigation Co., in which the plaintiff sought to recover $1,907.50, balance of account for new boilers supplied to the str. Filgate, the Quebec courts have found for the defendants on the cross claim of $1,559 for damages caused by delay in not having the boilers delivered in time to permit the vessel to go on her run May 1. The court also found, for the plaintiffs, for $348.50, the difference between the damage found to have been sustained by the defendants and the amount claimed for the boilers.

MAINLY ABOUT PEOPLE.

W. Evans, Inspector of Hulls, Toronto, is recovering from an operation for appendicitis.

C. H. Haswell, civil and marine engineer, died in New York May 12, as the result of a fall.

A. A. and Mrs. Allan, of Montreal, sailed from Montreal, May 10, on the S.S. Virginian, for England.

G. H. Ham, of the C.P.R. headquarters staff, returned to Montreal, May 10, after a trip to Mexico.

Mrs. Lukes, mother of Lewis Lukes, of Mackenzie, Mann & Co. (Ltd.), died in Toronto, May 12.

H S. Hendrie, youngest son of Hon. J. S. Hendrie, M.L.A., Hamilton, Ont., died at Baltimore, Ohio, May 6.

F. C. Daniels, C.P.R. locomotive inspector, Schrieber, Ont., died from injuries received in the yards there, May 5.

N. Guilford, formerly Vice-President New York Central and Hudson River Rd., died at Yonkers, N.Y., May 11, aged 66.

G. H. Webster, Secretary of the Eastern Canadian Passenger Association, is recovering from a serious attack of pneumonia.

Jas. Ross, President Dominion Coal Co., returned to Montreal, May 10, after having spent some months in the south of Europe.

R. Forget, M.P., President Richelieu and Ontario Navigation Co., has been elected chairman of the Montreal Stock Exchange.

Sir Sandford Fleming has been appointed a member of the Ottawa Improvement Commission, succeeding the late Sir Wm. Hingston.

R. B. Angus, director C.P.R., sailed in the Empress of Ireland on her last trip for the season from St. John, N.B., for Liverpool, Eng.

Lady and the Misses Shaughnessy arrived in Quebec, May 10, by the C.P.R. S.S. Empress of Ireland, after spending some months in Europe.

Point Butse, on the east side of Digby Island, Prince Rupert harbor, B.C., has been named after A. Butse, General Purchasing Agent, G.T.R.

Miss Agnes L. Campbell, daughter of Capt. P. M. Campbell, Collingwood, Ont., was married there May 16 to H. M. Dyment, of Barrie, Ont.

C. E. A. Goldman, Secretary-Treasurer of the Niagara, St. Catharines and Toronto Ry., was married in New York City to Mrs. C. K. Ansley, May 12.

Commander O. V. G. Spain, R.N., Dominion Wreck Commissioner, Ottawa, was married at Brooklyn, N.Y., May 4, to Miss B. Murray, of Toronto.

H. G. Cabret, General Superintendent of the Buenos Ayres and Rosario Ry., after spending some time in Montreal, returned to Buenos Ayres May 3.

The estate of the late Hon. A. G. Blair, first chairman of the Board of Railway Commissioners, has been valued for probate at over $192,000.

H. A. Thomas, heretofore District Passenger agent of the New York Central Lines in Buffalo, N.Y., has established a rail and steamship agency in that city.

Jas. Kent, Manager, and W. J. Camp, electrician, C.P.R. Telegraph Department, have completed a trip of inspection of the lines and offices to the Pacific coast.

W. S. Parke was presented with a silver tea service by a number of C.P.R. officials, on his leaving that company's service to join the staff of the Canada Car Co., Montreal.

A. J. J. Pfeiffer, General Manager of the Calcutta, India, tramways, was married in London, Eng., recently to Miss J. C. Newman, daughter of F. W. Newman, of Montreal.

H. T. Richardson, Superintendent C.P.R. Pacific Steamers at Hong Kong, passed through Montreal May 10, on his way to England, where he will spend a six months' holiday.

W. H. Evanson, traffic auditor of the C.P.R. Western Division, it is reported, has been selected by the Winnipeg Board of Control for appointment to the position of City Comptroller.

The marriage of Miss Hilda Wainwright, daughter of W. Wainwright, Comptroller and General Assistant G.T.R., to A. Chipman, is announced to take place in Montreal early in June.

C. M. Hays, Second Vice-President and General Manager G.T.R., celebrated his 51st birthday, May 16, by entertaining the heads of the various departments at dinner at the Canada Club, Montreal.

J. Hutton and C. Harris, of the C.P.R. engineering staff, on the construction of the Guelph and Goderich Ry., have left Goderich, Ont., for China, where they will be engaged on railway survey work.

C. W. Hibbard, General Passenger Agent of the Inter-oceanic Ry., of Mexico, is sending out to his Canadian railway friends literature descriptive of the country through which the line he is now engaged on runs.

Col. H. N. Ruttan, City Engineer of Winnipeg, is reported to have resigned his position. Among the duties of the position is the charge of a short line of railway connecting the city stone quarries with the C.P.R.

S. J. Selig, of the Intercolonial Ry. general audit staff at Moncton, N.B., died April 30. He was father of A. C. Selig, C.E., chief clerk to the Chief Engineer, I.C.R.; and B. Selig, of Rhodes, Curry & Co., Amherst, N.S.

E. A. James, Manager Canadian Northern Ry., who is on leave of absence, is not expected to return to that company's service. He left Winnipeg early in April for Victoria, B.C., and it is said that he intends to live there.

D. F. Henry, consulting engineer, Detroit, Mich., who was found dead in his rooms there, May 16, aged 74, was the originator of the proposal to construct a canal between Lakes St. Clair and Erie, through Kent County.

M. L. Hinman, who was connected with the Brooks Locomotive Works, Dunkirk, N.Y., died there May 3. He was Secretary and Treasurer of the company when it was merged in the American Locomotive Co. in 1901.

F. C. Bodwell, formerly on the survey staff of the G.T. Pacific Ry. near Edmonton, Alta., died at Victoria, B.C., recently. He was a brother of E. V. Bodwell, K.C., who formerly represented the Great Northern Ry., U.S., in B.C.

Major and Brevet-Lieut.-Col. G. M. Kirkpatrick, who was been appointed Assistant-Quartermaster-General in India, is a brother of G. A. Kirkpatrick, the recently appointed General Freight Agent, Atlantic Division, C.P.R., St. John, N.B.

C. E. Lambert, who has retired from active service owing to ill-health, was General Western Passenger Agent West Shore Rd., from 1884 to Feb., 1887, when he was appointed General Passenger Agent, which position he held on his retirement.

W. Askin, formerly commercial agent in Montreal of the Montreal and Lake Superior Line, was entertained at dinner there by a number of friends May 2, prior to his departure for Western Canada, where he purposes residing in future.

W. L. Lovitt, who died somewhat suddenly at Yarmouth, N.S., May 16, was one of the largest shipowners in Nova Scotia, and was largely interested in the Burrill-Johnson Iron Co., Yarmouth, which is engaged in building marine engines and boilers.

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R. H. Kerr, chief clerk in the C.P.R. Freight Traffic Manager's office, Montreal, was presented with a purse of gold by the staff of the department, April 26, on his leaving to join the company's construction staff west of Saskatoon, Sask.

C. H. Sullivan, who was in charge of the construction of the Victoria Bridge at Montreal for the builders, died at Ste. Anne de Bellevue, Que., April 27, where he was in charge of a bridge-widening contract on the C.P.R. for the Dominion Bridge Co.

D. Willcox, who resigned the presidency of the Delaware and Hudson Co., by cable from Europe, shot himself in his cabin on the S.S. Barbarossa while returning to New York. The suicide was reported when the steamer arrived in harbor April 27.

Mrs. G. M. Bosworth, wife of the Fourth Vice-President C.P.R., sailed for England May 31 on the Empress of Britain. On her return she will be accompanied by Miss Ruth Bosworth, who is at school in England, and who will "come out" in Montreal next winter.

C. K. Nimmo, who resigned the General Passenger Agency of the Rutland Rd. a short time since, is now manager of the Shattuck and Desmond Warehouse Co.'s warehouse, drayage and general city business at Los Angeles, Cal. His brother, W. J. Nimmo, is Secretary of the company.

Mrs. Oborne, wife of J. Oborne, General Superintendent Ontario Division C.P.R., died at Toronto, May 9. She was taken ill May 1, on her journey from Montreal, and could not be moved from the private car in which she was travelling to her new house. The funeral took place May 12, at Montreal.

Jas. N. Young, of Chicago, Ill., who died recently in California, was the principal promoter of the Toronto, Hamilton and Buffalo Ry. During the nine years he was engaged in pushing the interests of the railway he had a number of reverses, and lost something like $250,000 in the enterprise.

F. H. McGuigan, Vice-President Great Northern Ry., U.S., has been elected a director of the Crow's Nest Pass Coal Co. This company is interested in the Crow's Nest Southern Ry., which makes connection with the lines of the G.N. Ry. system, and owns the Morrissey, Fernie and Michel Ry. in B.C.

H. E. Vantelet, at one time in the C.P.R. engineering service, is suing the Dominion Government to recover $49,343.40. The statement of claim sets forth that in 1902 he was requested by the Department of Public Works to prepare detail plans of the steel sheds for certain wharves, overhead railways and crossings in Montreal harbor.

H. G. Reid, master mechanic, district no. 1, Lake Superior Division, C.P.R., North Bay, Ont., was born at Pembroke, Ont., Oct. 27, 1864. His record is: Mar. to Oct., 1884, engine cleaner; Oct., 1884, to Nov., 1887, fireman; Nov., 1887, to Dec., 1904, engineer; Dec., 1904, to June, 1905, relieving road foreman of locomotives; June, 1905, to Mar., 1907, engineer—all this service being at North Bay; Mar. to April, 1907, general foreman at Chapleau, Ont.

F. Moberley, of the G.T. Pacific Ry., Abitibi, has been appointed by the Ontario Government, Police Magistrate for the District of Nipissing, lying north of the southern boundaries of Bond, Currie, Bowman, Hislop, Guibord and Michaud tps., extending as far as Speight's line run in 1904; west to the district line between Algoma and Nipissing, and east to the Interprovincial boundary line, including the Abitibi Lake in Ontario, and the unsurveyed lands surrounding them.

J. B. Sheppard, who has been appointed contracting freight agent, Canadian Northern Ry., Toronto, was born at Teeswater, Ont., Nov. 27, 1881, and entered railway service 1897, his record being: 1897 to 1903, C.P.R. freight office, Toronto; 1903 to Jan., 1904, freight department Delaware, Lackawanna and Western Rd., Buffalo, N.Y.; Jan., 1904, to May, 1906, freight department, Lake Erie and Western Rd., Indianapolis, Ind.; May 1906, to April, 1907, freight department C.P.R., Toronto.

F. E. Barbour, who was recently appointed General Passenger Agent, Rutland Rd., Rutland, Vt., was born at Bangor, Me., April 3, 1870. He entered railway service, 1894, his record being: May, 1894, to June, 1898, clerk in freight and passenger office, New York Central and Hudson River Ry., Montreal; June, 1898, to April, 1902, travelling passenger agent same road, Albany, N.Y.; April, 1902, to April, 1907, general agent same road, Adirondack division, Montreal. In 1906, the duties of General Agent of the Rutland Rd. were added.

Randolph Macdonald, owing to business and other engagements, and a re-arrangement of the directorate of the Sovereign Bank, has resigned his position as President, being succeeded by Æ. Jarvis. Mr. Macdonald becomes Vice-President, succeeding D. M. Stewart, who has also resigned the position of General Manager. Mr. Jarvis, the new President, is, or has been, connected with the Hamilton, Grimsby and Beamsville Electric Ry.; Hamilton Iron and Steel Co.; Niagara, St. Catharines and Toronto Ry., and the Hamilton Steamboat Co.

C. G. Bowker, who has been appointed Trainmaster G.T.R. at Stratford, Ont., was born at Medford, N.J., April 21, 1871, and entered railway service in 1888, his record being: May, 1888, to Oct., 1890, operator, Philadelphia and Reading Rd.; Oct., 1890, to 1893, division operator, New England Division same road; 1893 to 1897, in charge of telegraph lines and electrical service, Buffalo Division, Lehigh Valley Rd.; 1897 to May, 1900, train dispatcher, Lehigh Valley Rd., Buffalo, N.Y.; May, 1900, to Feb., 1902, train dispatcher, G.T.R., London, Ont.; Feb., 1902, to Nov., 1905, train dispatcher, G.T.R., Durand, Mich.; Nov., 1905, to May, 1907, Chief Train Dispatcher, G.T.R., Stratford, Ont.

E. P. Lord, General Manager H. K. Porter Co., Pittsburg, Pa., died there April 13, aged 46. He was injured about three weeks previously by his horse rearing and falling backwards on him, and was believed to be progressing favorably towards recovery when apoplexy caused death. Born near Boston in 1860 he graduated from Yale University and afterwards from the Stevens Institute of Technology at Hoboken, N.J., and entered the Pennsylvania Rd. service, being located at Altoona Pa., and then at Fort Wayne, Md., as assistant Superintendent of Motive Power, subsequently becoming Superintendent of Motive Power Big Four Rd., and then going to the H. K. Porter Co. as Superintendent, afterwards becoming general manager.

G. T. Marks, of Port Arthur, Ont., who died in Toronto General Hospital May 20, aged 50, went to Port Arthur in 1873, and has ever since been prominently associated with its development as a marine railway and grain center. He was one of the promoters of the Port Arthur, Duluth and Western Ry., and of the Ontario and Rainy River Ry., which now form part of the Canadian Northern Ry., and was extensively engaged in grain shipping. In conjunction with his brother he owned and operated the S.S. Algonquin, one of the first Canadian grain carriers on the Great Lakes, and brought out the Neebing from England in 1904. His second wife, who survives him, is a daughter of J. H. Rowan, who was engineer of construction for the Dominion Government in charge of the sections of the C.P.R. east and west of Winnipeg in the seventies and early eighties.

W. G. Brownlee, who has been appointed General Transportation Manager G.T.R., was born at Lawrenceville, Ill., Sept. 9, 1858, and entered railway service in 1877, since which he has been consecutively to 1879, operator, Ohio, Mississippi Ry.; 1879 to 1881, operator and train dispatcher, Union Pacific Ry.; 1881 to 1884, train despatcher and Trainmaster Denver and Rio Grande Rd.; 1884 to 1887, train dispatcher, Union Pacific Rd., Laramie, Wyo.; 1887 to 1889, train dispatcher same road, St. Louis, Mo.; 1889 to 1892, Chief Dispatcher same road, St. Louis, Mo.; 1892 to Feb., 1900, Division Superintendent same road, St. Louis, Mo.; Feb., 1900, to May, 1901, Assistant Superintendent, Eastern Division G.T.R., Belleville, Ont.; June, 1901, to Mar., 1902, Superintendent Eastern Division same road, Montreal; Mar., 1902, to Dec., 1904, Superintendent Western Division same road, Detroit, Mich.; Jan., 1905, to April, 1907, Superintendent Middle Division, Toronto.

M. H. McLeod, Chief Engineer, Canadian Northern Ry., whose portrait is given on the first page of this issue, was born in Skye, Invernesshire, Scotland, July 13, 1857. His railway record is as follows: 1877, chainman, Victoria Ry., Ont.; 1879 to 1880, rodman and leveller, Credit Valley Ry.; 1881, transitman location surveys, Ontario & Sault Ste. Marie Ry.; 1882, resident engineer, construction Toronto and Ottawa Ry.; 1883 to 1885, assistant engineer, construction Lake Superior Section C.P.R.; 1886, on location and construction C.P.R. lines east of Montreal; 1887, on construction C.P.R., Sault Ste. Marie branch; 1888 to 1889, locating engineer, and in charge of construction, Windsor division, C.P.R.; 1890, locating engineer, Calgary & Edmonton Ry.; 1891, revision surveys C.P.R. and locating Niagara Falls, Park and River Ry.; 1892, revision surveys C.P.R. Chalk River to Sudbury; 1892 to 1895, Chief Engineer Lake Temiscamingue Colonization Ry.; 1896, division engineer, construction, Montreal and Ottawa Short Line, C.P.R.; 1897 to 1900, locating engineer, assistant chief Superintending engineer, and Chief Engineer and Superintendent, Crow's Nest Branch, C.P.R.; May, 1900, to date, Chief Engineer, Canadian Northern Ry.

E. G. Russell, who was engaged on the G.T. Pacific Ry. staff, and also held the position of postmaster at Prince Rupert, B.C., committed suicide by shooting himself with a revolver on his return to that town April 25. He was born at St. George, N.B., July 23, 1858, and entered railway service June 1, 1874, his record being: June to Aug., 1874, telegraph operator; Aug., 1874, to Aug., 1880, train dispatcher; Oct., 1880, to April, 1881, assistant to Superintendent; April, 1881, to April, 1882, train dispatcher; April, 1882, to Oct., 1886, Superintendent telegraphs; Oct., 1886, to Mar., 1888, Assistant General Superintendent (above service with the Minnesota and North-Western Rd., and its successor the Chicago, St. Paul and Kansas City Rd.); April to Nov., 1888, Assistant Superintendent Chicago Division, Illinois Central Rd., Cairo, Ill.; Nov., 1888, to Sept., 1889, Superintendent Chicago, Madison and Northern Rd., Rockford, Ill.; Sept., 1889, to Jan., 1890, also acting Superintendent of the Illinois Central Lines in Illinois and Wisconsin; Jan. to Dec., 1890, Superintendent Northern Lines Illinois Central Rd.; Dec., 1890, to Nov., 1891, Superintendent Wisconsin Division, same road; Mar., 1891, to Sept., 1892, Superintendent Transportation same road, Chicago, Ill.; Sept., 1892, to Jan., 1893, Superintendent Western Lines same road, Dubuque, Ia.; Feb., 1893, to April, 1899, Superintendent Rome, Watertown and Ogdensburg Rd.; April to July, 1899, Superintendent Morris and Essex Division, Delaware, Lackawanna and Western Rd.; July, 1899, to Sept., 1900, General Superintendent, same road; Feb., 1901, to 1903, Manager Intercolonial Ry.

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TORONTO, CANADA, JUNE, 1907.

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MANAGER:—H. R. Patriarche, 101 Bon Accord Building, Winnipeg.

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Railway Statistics for the Dominion.

The Department of Railways has adopted the schedules of the U.S. Interstate Commerce Commission for the collection of statistical information relating to Canadian railways. These schedules have been worked out with great care during a period of years and are regarded as the most complete and comprehensive available. By applying them to Canadian railways, it is believed that valuable and helpful comparisons might be made between the business of transportation in Canada, and that being carried on under similar conditions in the U.S. The new schedules are to be made the basis of the statistics for the current fiscal year. It is possible, that in the case of the smaller lines, a year or two will elapse before they will be in a position to readily supply the information required of them. This change has been made in the method of collecting and tabulating the statistics by J. L. Payne, Comptroller of Railway Statistics, to which position he was appointed in July, 1906. The methods followed up to that date were adopted at the establishment of the Department prior to 1875, and had undergone but slight modification. They were obviously defective and practically obsolete, in the light of modern practice and requirements. In connection with the abandonment of the old system, Mr. Payne has made a digest of the statistical information issued from year to year since 1875. The tables given represent a history in figures of the development of railways and the growth of railway business in Canada, from which we have made the following summaries and extracts:

MILEAGE.—It was in 1836 that railways were first operated in Canada, in which year 16 mles were open for traffic, and this remained the mileage until 1847, when an additional 38 miles were opened. In 1851 the mileage had increased to 159; in 1856 it had grown to 1,414, and since then the mileage operated at five year intervals had been:

1861	2,146 miles
1866	2,278 "
1871	2,695 "
1876	5,218 "
1881	7,331 "
1886	11,793 "
1891	13,838 "
1896	16,270 "
1901	18,140 "
1906	21,353 "

EQUIPMENT.—The totals given include hired locomotives and cars as well as those owned, but the information gathered in the past does not permit a comparison to be made between the tractive power of present day locomotives and those formerly in use, nor the relative capacity of cars. Some idea of the betterment in motive power may be had from the fact that in 1875 the volume of traffic was 5,786 tons of freight and 5,296 passengers per locomotive, as compared with 19,773 tons and 9,549 passengers in 1906. The same comparison applies to cars, the capacity of which has practically quadrupled within 30 years A loaded freight train of 250 tons was probably the maximum in 1875, whereas loads of 1,500 tons are now frequently hauled over the principal railways of the Dominion.

In addition to the above there are in use on Canadian railways 235 sleeping cars, 96 parlor cars, 80 dining cars and 61 official cars. In connection with freight service there are 1,655 refrigerator cars, 1,422 conductors' vans, 1,325 tool cars, 341 snow plows, 205 flangers, and cars of other descriptions. The grand total is 99,874 cars. Under the Railway Act of 1903 all cars were required to be equipped with air brakes and automatic couplers by Jan. 1, 1906, and the returns show that of all cars in use June 30, 1906, 91,015 were fitted with automatic couplers and 85,616 with air brakes.

	Locomotives	1st and 2nd Class Pass. Cars	Baggage Mail and Ex. Cars	Cattle, Box and Platform Cars	Dumping and Coal Cars
1875...	980	765	235	19,247	1,050
1876...	1,000	773	264	20,735	1,050
1881...	1,211	993	344	26,125	1,716
1886...	1,567	1,232	419	36,773	2,533
1891...	1,850	1,473	560	48,979	3,559
1896...	2,044	1,690	650	52,383	4,812
1901...	2,443	1,808	815	62,252	6,775
1906...	2,931	2,005	842	80,454	8,295

TRAFFIC.—The volume of traffic in the years quoted follows:

	Passengers Carried	Tons of Freight
1875	5,190,416	5,670,837
1876	5,544,814	6,331,757
1881	6,943,671	12,065,323
1886	9,861,024	15,670,460
1891	13,222,568	21,753,021
1896	14,810,407	24,266,825
1901	18,385,722	36,999,371
1906	27,989,782	57,966,713

The increase in the volume of passenger traffic during the whole period was 439.2%, and of passenger earnings 420.8%. The increase in the volume of freight traffic during the whole period was 922.1%, while the earnings therefrom increased by 574.4%.

ACCIDENTS.—The general average shows that only one passenger in 1,749,361 was fatally injured. For the years from 1896 to 1906 inclusive, the returns as to fatal accidents show:

	Passengers	Employes	Others	Total
1896	11	46	104	161
1897	7	76	130	213
1898	5	98	167	270
1899	20	119	145	284
1900	7	123	195	325
1901	16	118	183	317
1902	19	146	165	330
1903	53	186	181	420
1904	25	192	178	395
1905	35	206	227	468
1906	16	139	206	361

EARNINGS.—For the years already quoted the earnings were:

	Passengers	Freight	Mail and Ex	Miscellaneous	Total
1875...	$6,410,934	$12,073,570	$693,250	$292,784	$19,470,539
1876...	6,254,866	12,211,158	703,994	188,064	19,358,084
1881...	8,223,254	18,666,982	946,159	145,332	27,987,508
1886...	10,261,691	21,183,967	1,432,360	511,362	33,389,381
1891...	14,286,408	30,548,645	1,904,961	1,452,082	48,192,099
1896...	13,747,773	32,368,082	2,396,082	2,033,069	50,545,569
1901...	19,396,302	46,665,103	3,105,457	3,731,885	72,898,749
1906...	33,392,188	81,433,115	4,510,649	5,986,912	125,322,865

EXPENSES.—During the same years the expenditures were:

	Maintenance of Way Bldgs	Motive Power	Maintenance of Cars	Conducting Transportation	Total
1875...	$3,548,585	$4,679,270	$1,543,607	$5,653,079	$15,424,542
1876...	3,813,668	4,825,676	1,588,296	5,575,080	15,802,721
1881...	4,115,097	5,975,719	2,065,214	7,747,510	19,903,543
1886...	5,188,947	7,999 073	2,425,902	8,511,254	24,125,178
1891...	7,502,236	11,777,898	3,191,201	12,489,112	34,960.449
1896...	7,370,718	11,194,857	3,121,056	13,356,022	35,042,654
1901...	11,195,400	16,467,767	4,420,473	18,285,084	50,368,726
1906...	18,793,848	29,884,204	8,896,209	29,555,173	87,129,434

TRAIN MILEAGE.—Train and locomotive mileage for the years quoted:

	Passenger trains	Freight trains	Mixed trains	Train mileage	Engine mileage
1875...	5,206,353	10,910,181	1,563,644	17,680,178	19,633,026
1876...	5,837,461	9,616,148	2,650,019	18,103,628	21,001,052
1881...	8,298,957	15,163,634	2,099,487	27,301,306	34,265,003
1886...	9,214,131	15,914,127	5,182,557	30,481,086	37,359,499
1891...	14,987,647	23,592,370	4,819,161	43,399,178	56,950,343
1896...	15,846,645	23,299,776	5,354,181	44,500,602	55,786,960
1901...	19,115,472	23,888,302	10,345,620	53,349,394	68,621,424
1906...	28,071,648	39,045,168	5,606,666	72,723,482	94,180,788

GENERAL STATISTICS

	Freight Earnings per train mile	Average Earnings per ton carried	Passenger Earnings per train mile	Percentage of operat'g expenses to earnings
1875...	$0.968	$2.129	$1.231	81.1
1876...	0.995	1.928	1.071	81.6
1881...	1.081	1.547	0.991	71.9
1886...	1.004	1.351	1.114	72.4
1891...	1.075	1.404	0.953	72.5
1896...	1.130	1.333	0.868	69.3
1901...	1.363	1.261	1.015	69.0
1906...	1.824	1.405	1.189	69.5

It will be seen that the tendency of the earnings per ton has been downward, while the earnings per train mile have moved steadily upward. In the next report the statistics will show the earnings per ton per train mile, which is the basic item in considering the economic aspect of the transportation question. The passenger earnings per train mile are indefinite; if the data were sufficiently elaborate to show the number of passengers carried one mile, a factor would be had which would throw direct light on the passenger traffic of each railway. This information it is proposed to obtain in future years. For the first ten years during which the Department was collecting statistics, the average percentage of operating expenses to earnings was 76.8, while for the last ten years under review the average was 69.1%.

CAPITAL INVESTED.—The total capital invested amounts to $1,332,498,704, towards which there has been contributed:

Dominion Government subsidies	$194,188,584
Provincial Government subsidies	43,278,022
Municipal subsidies	17,125,164
Total	$254,591,770

Included in these payments, however, is the cost of the Intercolonial Ry. and the Temiskaming and Northern Ontario Ry. The division of the nominal capital paid up is as follows:

	Miles	Amount	Per Mile
Ordinary shares		$385,088,053.87	$17,896.09
Preference shares		176,567,341.38	8,205.56
Bonded debt		504,226,233.64	23,432.76
Capital from other sources		12,025,305.66	558.85
Dominion subsidies		194,188,584.18	9,024.47
Ontario	7,348	16,545,939.32	2,251.76
Quebec	3,407	16,754,426.16	4,917.65
N. Brunswick	1,623	4,186,137.71	2,579.26
N. Scotia	1,214	3,753,431.18	3,091.79
P.E.I.	267	.....	.....
Manitoba	2,823	1,916,952.75	679.05
B.C.	1,663	121,135.00	72.84
Alb. & Sask.	3,173	.....	.....
Municipal subsidies:			
Ontario		12,928,290.18	1,759.43
Quebec		2,896,536.08	850.17
New Brunswick		341,500.00	210.41
Nova Scotia		283,023.93	233.13
P.E.I.		.....	.....
Manitoba		490,600.00	173.79
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Government Transportation Statistics.

In bringing forward the estimates for the Department of Railways and Canals in the House of Commons recently, Hon. H. R. Emmerson, then the Minister, made an exhaustive statement in which he dealt with a number of matters which had not been mentioned in the ministerial statements in previous years. Within recent years the Railway Commission and the Transcontinental Railway Commission have been added as branches of the Department. There are in the Department's employ about 3,000 persons in connection with the canals, over 9,500 on the Intercolonial Ry. and 1,300 on surveys, on transportation service and at headquarters under the Transcontinental Railway Commission. The total capital expenditure on the canal system during the past ten years was about $24,000,000. The capital expenditures on the different canals in that period was as follows:

Farran's Point	$ 869,256.51
Rapide Plat	661,480.40
Galops	4,559,479.31
" North Channel	1,539,590.72
River reaches	202,158.14
Galops channel	348,080.78
Lake St. Louise	243,512.66
Lake St. Francis	75,906.71
Cornwall	1,265,404.14
Lachine	1,452,937.67
Beauharnois	25,000.00
Soulanges	4,615,266.15
Welland	3,026,210.96
Sault Ste. Marie	1,095,664.16
Trent Valley	3,738,663.27
Carillon and Grenville	152,304.10
Cailbute Lock	3,282.00
Rideau	1,565.84
Tay	2,750.00
Murray	1,350.00
Total	$23,879,792.82

During the same period 5,131 miles of railway were constructed to which the Dominion contributed $15,338,508.30. This does not include the cost of either the Intercolonial or the Prince Edward Island Ry. There has been a large and continuous expenditure on capital account on the Intercolonial Ry. since the completion of the line on July 1, 1876. The standard of railway construction and equipment of to-day is far in advance of what was required at that time, and increasing expenditures are necessary to keep pace with the demands. Even within the last ten years there have been great advances made in the improvement of roadbeds and equipment which call for considerable capital expenditure. The average freight car to-day is 60,000 lbs.; a few years ago it was 40,000 lbs.; and locomotives have practically doubled in weight and price. To carry these greater weights the roadbed has to be relaid with heavier rails, and extra ballasting is required; portions of second track have to be constructed, curvature taken out and gradients reduced. There has not been so much work done in the way of reducing gradients on the I.C.R. as its interests demanded, but there has been an increase of the depth of ballasting, which had been met out of revenue and not out of capital. The line loses the use of a large number of its cars because there is not so much traffic coming off as there is going on to foreign lines. On Nov. 8, 1906, there were 4,403 I.C.R. cars off the line, while the total foreign cars on the line was 1,652; the total shortage owing to exchange of cars and those on branch lines being 2,028. These branch lines were constructed with the aid of Dominion and Provincial subsidies, but their freight equipment is small or non-existent. The I.C.R., seeking to gather up all the traffic it can, furnishes cars for these branch lines, to some extent to the disadvantage of shippers located on the main line.

The following table gives comparisons between the line in 1896 and in 1906:

	1896	1906	Inc. %
Length of line	1,182.5	1,477.92	25
Capital invested	$55,267,044	$81,238,728	41
Locomotives	204	347	70
Passenger car serv.	276	429	55
Freight car service	6,667	10,819	62
Ploughs, flangers, etc.	77	129	67
Engine mileage	4,714,661	9,304,511	99
Train mileage	3,842,502	7,424,831	93
Car mileage	43,005,684	93,746 123	117

In addition to this the line has been relaid with 80 lb. steel, replacing 62½ lb. rails; nearly the entire line has been reballasted; bridges have been replaced; new terminals have been provided, and new roundhouses built at many points.

Coming to the figures for 1906 there was an increase of 326,570 freight train miles, a decrease of 198,484 passenger train miles, and a decrease of 223,868 light and shunting engine miles as compared with 1905. The total engine mileage in 1906 was 9,304,511, against 9,400,293 in 1905; the freight car mileage was 78,399,746, against 72,739.921 in 1905; the passenger car mileage was 15,346.377, against 15,515.356 in 1905. The statistics also show:

	1906	1905
Tons carried one mile	851,211,445	711,049,733
" per engine mile	91.5	75.6
Passengers carried	2,737,160	2,810.960

The returns of the gross revenue were:

	1906	1905
Passengers	$2,297,716	$2,105,066
Freight	5,019,805	4,373,178
Mails, etc	326,307	305,277
Total	$7,643,828	$6,783,521

The expenditures were:

	1906	1905
Locomotive power	$2,930,075	$3,116,653
Cars, transportation and repairs	1,617,119	2,040,133
Maintenance of way and works	1,397,143	1,722,616
Station expenses	1,032,764	937,816
General charges	586,267	535,541
	$7,563,368	$8,352,759

The car mileage showed a gain of $121,456, against a loss of $16,065 in 1905; and the rental of leased lines was the same in both years, $140,000. The total improvement in the operation of the I.C.R. in 1906 as compared with 1905 was $1,787,219.

The cost per train mile was $1.021., and per engine mile 81.5c, against $1.166. and 90.5c. respectively for 1905. The revenue statistics showed:

	1906	1905
Earnings per train mile	$1.0294	$0.93
" freight car mile	0.06	0.06 1/10
" ton mile	0.05 897/1000	0.06 145/1000
" passenger	0.95 9/10	0.85 7/10
" passenger mile	0.19 7/10	0.19 3/10

For the fiscal year the I.C.R. hauled 851,211,445 tons of pay freight, using one car for every 14.22 tons. The result of the operations of the I.C.R. for 1906 showed a balance of earnings over expenditure of $61,915.34; to which must be added the profit derived from the Windsor branch, $31,966.34, making a total surplus of $93,881.87. The Prince Edward Island Ry. showed a loss of $36,982.24 in 1906, against a loss of $153 133.83 in 1905. The accounting system on these railways has been brought into harmony with that in use on other railways in Canada and the U.S.

The locomotive and car shops at Moncton, N.B., are being rebuilt out of capital, the cars, etc., burned being replaced out of revenue. The temporary shops, which were provided out of revenue, cost $60,000.

So far as the current financial year is concerned, the earnings for the six months ended Dec. 31, 1906, were $4,425,213.28, and the expenditure $4,047,556.43, showing a net surplus of $377,656.85.

The G.T.R. put in force, June 1, an increased rate of pay for its roadmasters, section foremen and section men.

ELECTRIC RAILWAYS.

Projects, Construction and Betterments.

Brantford and Hamilton Electric Ry.—The grading on the mountain section, for which Nicholson and Riley had the subcontract, has been taken over by F. Dickenson, who has practically completed his contract of grading from Ancaster to Brantford, Ont. The placing of ties and tracklaying will be started at an early date. A contract has been let to Woodman Bros. for the overhead work.

Calgary Electric Street Ry.—The ratepayers voted recently in favor of a by-law to raise $250,000 by means of debentures for the construction of an electric railway in the city. The work is to be done by the city council, which has appointed a special committee to take charge of the work.

Edmonton to Strathcona.—A report on the construction and operation of an electric railway between Edmonton and Strathcona, Alta., as a city enterprise is under consideration by the City Council. The report of City Engineer Keeley, presented recently, sets out that the cost of construction and operation of such a line would be less than on a purely city line. He gives the following figures as to the cost of operating a line in the city as against a line to Strathcona. First, as to the cost of operating the line adopted by the City Council. This is the most expensive. Its length is six miles. With a 15-minute service from 6 to 12 midnight, and a 6-car equipment, the cost of operation would be $138 a day, or $50,400 for a year. The cost of operating the route as recommended by the commissioners, which provided for five miles of trackage, would be for the same service $126 a day, or $46,000 a year. The cost of operating a Strathcona line would be on the same basis for a six-mile track and 30-minute service, cost $106.85 a day, or $39,000 a year. The service would require six cars, four of which would be placed on regular duty. The other two would be required for excursions and specials. The cost of operation would be slightly less, due to the fact of 30-minute service, which would answer for the greater part of the day. Also the capital invested would be slightly less because of the cutting out of the sub-station, and the chances are that there would be a far greater number of passengers carried on the Strathcona line than on an equal length of track in either of the two cities, while a 10-cent fare would be charged. The route surveyed between these points goes down Saskatchewan avenue and across the river by the bridge. The exact ascent of the Strathcona hill has not yet been determined upon. A comparatively easy gradient has been obtained.

Fort Frances to Duluth.—Proposals are being made for the construction of an electric railway from Fort Frances, Ont., to Duluth, Minn. It is stated that the run could be made in three hours, and that there will be plenty of power available on the completion of the power dam at the International Falls on Rainy River.

Hamilton, Waterloo and Guelph Ry.—The joint committee of the Hamilton City Council, Board of Trade, Parks Board and Trade and Labor Council, recently decided upon instruction to be given an engineer to select a route for this company from Rock Chapel to James St. A. F. McCallum has been appointed as the engineer. The company desires to run through Dundurn and Harvey parks, to which there is a strong objection on the part of citizens.

Grand Valley Ry.—Press reports from Brantford, Ont., state that conditional on an exchange of bonds by the present shareholders, the Grand Valley Ry. Co., the Brantford

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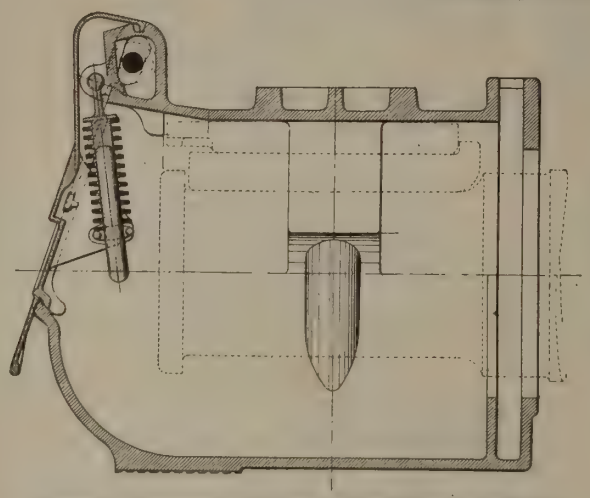

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Street Ry. Co., and the Woodstock, Thames Valley and Ingersoll Electric Ry. Co., will be amalgamated and operated under the first mentioned name. Among the new works proposed are: Increase of track mileage, double-tracking on Colborne St., Brantford, extension to Cainsville, new line to Woodstock connecting with the Woodstock, Thames Valley and Ingersoll line which will be extended to London, and a new line to Port Dover. M. A. Verner, Pittsburg, Pa., it is stated, will control the operations of the new company.

Montreal and Southern Counties Ry.—The Montreal City Council has passed a by-law granting a right to enter the city by way of Common St. and Black's Bridge. The company will pay annually $500 a mile for the length of streets actually used; other companies to be allowed to use its tracks on Common, Grey Nuns and Williams streets on payment of reasonable compensation; the contract to extend for 24 years from Jan. 1, 1907, and to be renewable for periods of five years thereafter. The company's lines will reach the city over the Victoria Bridge, and will give communication with St. Lambert and other points on the south shore of the St. Lawrence.

St. Leon Ry.—The provisional directors named in the act incorporating this company are G. G. Ruel, G. T. Macdonald, L. W. Mitchell, F. C. Annesley, and M. H. Seed, Toronto, who are all in Mackenzie, Mann & Co.'s Toronto offices. The company, which has a capital of $100,000, is authorized to construct an electric railway from Louiseville to Three Rivers, via St. Leon, Que. It is given authority to develop and dispose of electric power.

St. John Suspension Bridge.—The New Brunswick Government has under consideration plans for the construction of a bridge across the St. John River at its mouth, to replace the present suspension bridge. The proposed new structure will be a cantilever one, and it will be made wide enough to accommodate a double track electric railway, in addition to a roadway for vehicles, and sidewalks for foot passengers.

Toronto and York Radial Ry.—A large block of land on the west side of Yonge St., Toronto, and north of the C.P.R. tracks, has been purchased. It is intended to erect a passenger and express station there. It was announced recently that the extension of the Metropolitan Division from Newmarket to Jackson's Point would be opened for traffic on June 1

Toronto, Niagara and Western Ry.—The Hamilton City Council was informed recently that the company had filed its plans for the line from Niagara Falls to Toronto. The line will run along the beach, and at Burlington there is a junction for a line which runs along near the Plains, thus encircling the bay. Another line enters the city over the Hamilton, Grimsby and Beamsville Electric Ry. tracks. The company proposes to use the terminal station in Hamilton. A line to Brantford and other points leave the city via York and Dundurn streets. The route map submitted to Brantford City Council shows a line from Hamilton, serving Langford, Cainsville, Brantford, Mount Vernon, Burford, Cathcart and Muir. The plan does not show the intended route through the city, but the general route through Brant county.

Toronto Ry.—The track on King St. is being relaid with 96 lb. rails. The City Council is considering the question of the construction of additional lines, and has before it a special report prepared by B. J. Arnold, of Chicago, in which a number of new lines are recommended.

Toronto Suburban Electric Ry.—A survey party has gone over the route between the end of the present line at Lambton Mills and Brampton, Ont., and directors are said to be considering whether this route should be adopted instead of the previously surveyed one from the present Western terminus.

Winnipeg Electric Street Ry.—W. Phillips, Manager, is quoted as saying that the company would construct a branch along Pembina highway in Fort Rouge, from Croydon St. to Portage Junction, on which the tracks would be laid during the summer. It was intended to extend as far as St. Norbert, but he could not say whether the tracks would be laid to that point this season or not.

Electric Railway Notes.

W. Williamson, a street railway conductor at Hamilton, Ont., has been fined $30 for being drunk whilst on duty.

J. H. Larmouth, C.E., Manager Peterboro Radial Ry., has been appointed examiner of motormen at Peterboro, Ont.

The councils of York tp., and the Village of Weston, Ont., have applied to the Ontario Railway and Municipal Board to compel the Toronto Suburban Ry. Co. to carry out its agreement.

The Montreal Street Ry. has adopted a new and more simple transfer slip than that formerly in use. Passengers have to ask for a transfer when paying their fare, and must board cars at the junction point only.

The Ontario Railway and Municipal Board has concluded its investigations into the overcrowding of the street cars in Toronto, and has made a report. In addition to making a number of recommendations as to various matters, the report recommends the construction of over 10 miles of additional double track lines, and the building of 100 cars.

The C.P.R. will start running early in June, an additional fast trans-continental train between Montreal and Vancouver to make the distance in 84 hours. The train will leave Montreal Mondays, Wednesdays and Fridays.

The board of conciliation to investigate the dispute between the G.T.R. and its machinists has been finally constituted. The members are: W. Nesbitt, K.C., for the company; J. G. O'Donoghue for the men; and Professor A. Shortt, Kingston, Ont., third arbitrator.

The rates for pilotage at Victoria, B.C., have been reduced to an extent varying from 20 to 28%, upon coasting vessels. The rates remain practically the same on all ocean liners, and will also apply to U.S. vessels plying to Victoria, from San Francisco and intermediate points, Skagway or any intervening port.

The C.P.R. Freight Traffic Manager has issued a circular to shippers calling attention to the necessity for more care in marking and addressing freight in order to prevent loss and miscarriage. Old marks should be effaced, the address or distinguishing mark properly stencilled, the goods and marks fully described on the way bill and the route definitely set out.

As the result of the recent conference between Commander Spain with President Livingstone, of the Lake Carriers' Association, and various U.S. officials, a Canadian tug—Home Rule—has been placed in charge of the navigation of Limekiln crossing. The channel is in Canadian waters, but was dredged out by the U.S. Government. Upbound vessels will be required to take the easterly channel, and downbound the westerly. It is the smaller class of upbound boats that have caused all the trouble. This arrangement will hold until the new rules now being prepared at Washington, and which will be agreed to by Canada, are promulgated. All expenses in connection with the matter is borne by the Lake Carriers' Association.

International Traction Co.

This company has in operation 356 miles of electric railway in the United States and Canada, including the following: Buffalo Ry., Buffalo Traction Co., Buffalo, Bellevue and Lancaster Ry., Buffalo and Niagara Falls Electric Ry., Buffalo and Lockport Ry., Elmwood Avenue and Tonawanda Electric Ry., Lockport and Olcott Ry., Buffalo, Tonawanda and Niagara Falls Electric Rd., Niagara Falls and Suspension Bridge Ry., Niagara Falls, Whirlpool and Northern Ry., Niagara Falls Suspension Bridge, Clifton Suspension Bridge, Lewiston Connecting Bridge, Queenston Heights Bridge Co., Niagara Falls Park and River Ry., which have been merged in the International Ry. Co., and the Crosstown Street Ry. Co., of Buffalo, and the Electric City Ry. Co., Niagara Falls, N.Y., which are operated as separate companies. The annual report for the year 1906 says:

"The physical condition of the property was not only fully maintained, but improved. The new car shops, finished during the year, are as complete as any in the country and afford every facility for the proper maintenance of equipment; a new model sub-station was established on the east side of Buffalo; 150 new cars, of the most up-to-date type, and costing nearly $1,000,000, were purchased; 12 miles of track were laid through Fillmore Ave., Buffalo, under franchise obtained in the fall of 1905, and this line will be open for traffic in the early spring. In view of the fact that a fast electric line is to be built from Toronto by way of Hamilton to Niagara Falls, Ont., in the near future, and as an electric line, now under construction, between Lockport and Rochester will be completed during 1907, both of which lines are to connect with our system, and as the capacity of our Niagara Falls line is already taxed to the utmost by present travel, a franchise has been secured, and it is proposed to build within the next 18 months a new double track line, over its own right-of-way, between Buffalo and Niagara Falls, connecting at Tonawanda with our Lockport division. Inasmuch as the company cannot increase its bonded indebtedness, it will be necessary, in order to carry out its undertakings, not only to expend the profits of 1907, but also to borrow $1,000,000 from the banks. While the directors regret that the payment of dividends must for these reasons be further delayed, they believe they are best serving the interests of the stockholders by maintaining their magnificent property in first-class physical condition, and by making such betterments and extensions as are necessary to keep abreast with the growth of the territory served."

ASSETS

Stocks and bonds of other companies	$29,949,763.48
Organization expenses	15,488.14
Bills receivable	3,131,128.52
Accrued interest on bills receivable	112,367.64
Car trust, no. 1	224,835.11
Car trust, no. 2	914,301.25
Accounts receivable	324,234.21
50-year 4% collateral trust bonds on hand	300,000.00
Funds in bank to pay coupon interest	361,860.00
Funds with treasurer	4,790.62
	$35,338,768.97

LIABILITIES

Capital stock	$15,000,000.00
Funded debt	18,255,000.00
Car trust certificates, no. 1	112,000.00
Car trust certificates, no. 2	570,000.00
Bills payable	425,000.00
Accrued interest on funded debt	362,226.67
Accrued int. on car trust certificates	1,068.75
Surplus	613,473.55
	$35,338,768.97

INCOME ACCOUNT	Year Ended Dec. 31, 1906
Gross earnings from operation	$4,972,688
Operating expenses	2,884,985
Net earnings from operation	$2,087,703
Miscellaneous income	69,110
Gross income less operating expenses	$2,156,813
Interest, taxes, rentals, etc.	1,691,959
Net income	$464,854

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Toronto and York Radial Railway.

The Metropolitan Division of this line from Toronto to Newmarket, Ont., has been extended to Jackson's Point, Lake Simcoe, a further distance of 24.72 miles.

The line has been built entirely on the company's own right of way, 66 ft. wide, with greater widths where heavy cuts required them. One cut is 31 ft. deep. The right of way cost about $1,500 a mile. The heaviest curve outside the town of Newmarket is a 5° curve. The next is a 3°.50″ curve at Roach's Point. All others are 2° curves or under. All curves of 1° or over have transition curves at each end. The maximum gradient outside of Newmarket is 1½ per cent. The grading amounted to a little over 8,000 cubic yards per mile. There are two long trestles on the line; one at Newmarket at the overhead crossing of the G.T.R., 800 ft. long, including a plate girder span 82 ft. long over that railway, resting on concrete piers. The trestle is of wood, with a wooden Howe truss span of 50 ft. in the middle over the Holland River. The other is a pile trestle 332 ft. long over the Jersey River near Keswick. The line is well ballasted, having 10 inches of ballast under the ties. The rails are of 60 lbs. section made by the Algoma Steel Co., and are 33 ft. long. Cedar ties are used throughout. There are five through sidings, giving 700 ft. of clear siding room, and one through siding at Newmarket 1,300 ft. long. These sidings all turn out on the same side, and leave the main line on the proper alignment. No. 9 fangs are used. The points reached by this line are Newmarket, Sharon, Queensville, Ravenshoe (about one mile to east), Keswick, Orchard Beach (summer resort), Roach's Point (village with large summer population), Morton Park, Stouffville-on-the-Lake (summer resort), and Jackson's Point, with the village of Sutton one mile south. About 17 miles of the line is in view of Lake Simcoe throughout, and in most places is only far enough from the lake to avoid interference with the building of cottages and other resort buildings.

The feeder system of this line seems somewhat erratic at first glance, but this is caused by the peculiar gradients that had to be encountered in laying the track over one of the highest points in Ontario—the Pinnacle Hill—some 600 ft. higher than the southern terminus. The power for this line is supplied partly from Niagara Falls and by two generating stations and one sub-station. The generating stations are situated at Bond Lake and Keswick, and the sub-station in Newmarket. The power station at Keswick contains three Scotch marine boilers of 250 h.p. each, built by the Polson Iron Works, and equipped with automatic stokers, and fans driven by ideal engines. The coal is brought in at the back of the boiler room and emptied into the bins, and from there fired by hand to the hoppers of the stokers. A steel stack 50 ft. high and 50 ins. in diameter takes off all flue gases. Three 8-inch leads connect to a 15 in. main, and from there 2 ft. 7 in. headers are taken to two 500 h.p. cross compound condensing engines. Steam separators are installed above the throttle valves and steam is used at 130 lbs. pressure. A vacuum of 25 ins. is maintained by an independent jet condensor located in the basement, which is large enough to take care of both engines. The engines are 18 x 36 x 18 ins., and are belted direct to four compound wound d.c. generators built by the Canadian General Electric Co., and supply current at 625 volts to the switchboard, on which is located all the necessary switches, circuit breakers, ammeters, etc., for distribution of current to the line. Six 4-0 feeders leave this station, two going north five miles, two going direct to the line at the station and two going south, a distance of four miles, and the switchboard is wired to allow of these circuits being cut and independent of each other, and with trolley breaks at proper places. There is also a 4-0 feed and 4-0 trolley the full length of the line, which is in addition to any other feeder mentioned. A high pressure air pump pumps air at 350 lbs., for the air brake on the cars, to a tank located at the track. The injection water is taken direct from Lake Simcoe, and the condensed steam is pumped through a heater to the boilers, 1½ in. injectors are also used in case the boiler pump should happen to fail. The building is well lighted with windows by day and 5 arc lamps at night, and is located about 11 miles south of Jackson's Point. This station, although not built along the lines of the latest electrical engineering, was considered good practice by the company on account of the close proximity of Niagara power.

The sub-station at Newmarket, 14 miles south of Keswick, contains 2 Westinghouse rotary converters with step-down transformers and switchboards, with necessary switches, circuit-breakers, etc. The rotaries are 125 k.w. each, and start from the a.c. side, and synchronize dark. The current on the a.c. side is 350 volts, and is delivered to the line at 570 d.c. Two 500,000 c.m. lead-covered cables bring the current from the lightning arrester in the basement here to the first trolley post, where it is taken up and joins the regular feeder, one going each way. A car compressor is situated in the basement, and compressed air is used for cleaning the machines. The entire equipment of this station was furnished by the Westinghouse Co.

The station at Bond Lake, 10 miles south of Newmarket, contains four horizontal tubular boilers of 150 h.p. each, and one Scotch marine boiler of 250 h.p., built by the Polson Iron Works. The boilers are hand fired and connected to a 14 in. steam main by 6 in. leads. The steam is taken from here to two 350 h.p. and one 500 h.p. cross compound condensing engines. The 350 h.p. engines are 17½ x 32 x 42, and are belted direct to two 275 k.w. Westinghouse double current compound wound machines. These supply a.c. current at 350 volts 60-cycle, and this is stepped up to 16,500 volts for transmission to the Newmarket sub-station. The high tension line is transposed six times in this distance. These engines exhaust into independent jet condensors, and the condensed steam is pumped through heaters in the exhaust pipes back to the boilers. Steam is used at a pressure of 115 lbs., and a vacuum of 26 in. is maintained. The current on the d.c. side is generated at 570 volts, and sent direct through the switchboard to the line. The 500 h.p. engine in this station is similar to those at Keswick, and operates under the same conditions. Another compressor operated at 350 lbs. pressure is situated in the basement at Bond Lake. This station supplies current as far south as Thornhill—a distance of say 10 miles—where a trolley break is inserted, and from there down to North Toronto current is supplied by the Toronto Railway Co. and Niagara Falls power. Two 500,000 c.m. covered cables and one 4-0 covered feeder supplies current for this part of the line—a distance of 9 miles.

Recording steam gauges and recording volt meters are used at Keswick and Bond Lake Stations. The cars are despatched by means of the company's own telephone system. A bare copper circuit is strung on the same cross arms as the feeder.

The extension was announced to be opened for traffic June 1, with a service of four trips a day.

Electric Ry. Finance Meetings, Etc.

Berlin and Waterloo Street Ry.—The Berlin, Ont., Town Council has taken over the property of the Berlin and Waterloo Street Ry. Co., and is operating it, the railway having been placed under the management of the Light Commissioners.

Halifax Electric Tramway Co.—Railway earnings for April $12,982.13, against $12,221.44 for April, 1906.

Montreal Street Ry.—Passenger earnings for April, $270,540.31; total earnings, $274,635.30. against $232,145.63 passenger and $235,615.30 total for April 1906. Operating expenses, $166,421.95; rent leased lines, $339.96; city percentage on earnings, $19,015.68; interest on bonds and loans, $12,434.90; contingent for renewals, $13,527.02; surplus, $62,805.76; against $136,662.80 operating expenses; $15,555.01 city percentage on earnings, $13,777.91 interest on bonds and loans; $11,780.76 contingent for renewals, and $57,838.82 surplus for April, 1906. Rental of leased lines is an extra charge in the current year's accounts. Gross earnings for seven months ended April 30, $1,873,683; operating expenses, $1,240,078.94; fixed charges, $284,195.98; surplus, $349,408.83, against $1,641,937.89 gross earnings; $1,065,294.36 operating expenses; $219,738.59 fixed charges, and $356,904.74 surplus for same period 1905-06.

Toronto Ry.—Car earnings for April, $261,608.68, against $231,034.28 for April, 1906.

Sandwich, Windsor and Amherstburg Ry.

The annual report of the Detroit United Ry. Co., which owns the S. W. and A. Ry., for the year ended Dec. 31, 1906, contains the following particulars with reference to the latter line: The mileage on Jan. 1, 1906, was 25,184 miles, to which there had been added 0.076 miles. Passenger statistics—revenue passengers, 2,264,999; transfers, 165,720; employes, 39,872; total, 2,470,591. Receipts per revenue passenger, .0536; receipts per passenger, .0492. Mileage statistics—car mileage, 534,490; earnings per car mile, .2328; expenses per car mile, .1207; net earnings, .1121. The earnings and expenses of the different companies are not given, the totals only are published for the whole system as follows:

	1906
Gross earnings	$6,063,182.54
Operating expenses, including taxes	3,718,621.54
Net earnings from operation	$2,344,561.00
Income from other sources	58,757.73
Gross income less operating expenses	$2,403,318.73
DEDUCTIONS:	
Interest on funded and floating debt:	
Detroit United Ry.	$ 988,806.72
Rapid Ry.	135,050.00
Sandwich, Windsor & Amherstburg Ry.	18,000.00
Detroit, Monroe & Toledo Short Line Ry.	101,416.66
	$1,243,273.38
Dividends, Detroit United Ry.	625,000.00
Charged off for depreciation	250,000.00
Total deductions	$2,118,273.38
Surplus income	$ 285,045.35

There has been a special expenditure on the line of $130,080.57, for additions to the lighting plant in Windsor, Ont., the pavement and standardizing of tracks; the provision of additional feed wires; the purchase of four new open cars, and for part construction of the Windsor and Tecumseh extension. The general balance sheet of the S.W. and A. Ry. follows:

Capital stock		$ 297,000.00
Mortgage bonds		400,000.00
Bills payable		70,000.00
Accrued interest on bonds		1,500.00
Accrued insurance		366.69
Detroit United Ry.		198,529.05
Accident fund		581.37
Unredeemed tickets		1,220.28
Surplus		33,518.00
Investment	$ 875,472.44	
Current assets	118,660.56	
Prepaid taxes	2,408.06	
Stores	2,662.36	
Cash	3,511.97	
	$1,002,715.39	$1,002,715.39

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ARTHUR M. GRANT, MANAGER.

Niagara, St. Catharines & Toronto Ry. & Navigation Companies.

Following are extracts from the directors' report presented at the annual meeting recently. Notwithstanding the very serious interruption to traffic during the summer by the almost complete reconstruction of the road-bed, the net earnings show a satisfactory result of the year's operations. During the year, almost the entire length of the main line between Port Dalhousie, St. Catharines and Niagara Falls was relaid with 80 lb. open hearth steel rails, the 56 lb. rails in previous use being used in the construction of branch lines. Nearly all the wooden trestles on the main line were either filled with earth filling or were replaced by steel and concrete spans and bridges, and the permanent way is now equal to any in the country, with a resultant economy in cost of maintenance and the ability to operate a faster train service.

It having been decided to be greatly to the advantage of the company to construct a branch line from Thorold, on the main line, to Fonthill and Welland, a distance of 11 miles, contracts were let, and construction to Fonthill is almost completed, and the remaining 4 miles to Welland will be completed some time this summer. This new line, it is anticipated, will add largely to the gross earnings without a corresponding increase in the percentage of operating expenses, and the net results should show an increased profit. Another branch line from St. Catharines to Niagara-on-the-Lake is under consideration. This extension should also prove a profitable undertaking, and estimates are being prepared by the engineers.

The equipment and rolling stock has been maintained in a high state of efficiency, but will have to be materially added to by reason of the increased mileage to be covered by the company's operations. The small hydraulic power station on the Welland Canal, owned by the company, has been sold and the proceeds of the sale will be expended in providing motor generators of 1000 h.p. capacity, which will be operated by electric power from Niagara Falls, and assure sufficient power for the requirements of the company's main line and the extensions now completed and under construction.

The steamboat Lakeside has been placed in first-class condition for the ensuing season's operations, and the steamboat Garden City is being thoroughly overhauled in Toronto, and will be much improved when placed in commission for the season of 1907.

ASSETS.

	1906
Investment Account	$2,289,462.35
Accounts receivable	10,782.33
Stores	16,037.14
Cash	6,725.99
Suspense	2,442.61
Navigation stock in treasury	100,000.00
	$2,425,450.42

LIABILITIES.

	1906
CAPITAL STOCK	
Railway	$925,000.00
Navigation	100,000.00
FIRST MORTGAGE BONDS	
N., St. C. & T. Ry. Co.	819,000.00
N., St. C. & T. N Co.	200,000.00
CURRENT LIABILITIES—	
Accounts payable	24,304.51
Bills payable	10,000.00
Interest accrued but not due	7,254.30
Permanent account	52,940.57
Welland extension	114,782.50
Profit and loss	172,168.54
	$2,425,450.42

RECEIPTS.

	1906
MAIN LINE—	
Passenger earnings	$91,896.67
Freight "	53,957.45
Express "	954.03
Sundry "	3,072.87
WESLEY PARK—Earnings	34,187.51
LOCAL LINE—Earnings	20,046.61
Brought forward	$204,115.14
NAVIGATION CO.	
Passenger earnings	32,899.21
Freight "	26,807.85
Sundry "	1,257.64
	$265,070.84
Maintenance bridges and buildings	$ 15,662.22
Maintenance locomotive and car dept.	27,692.79
Maintenance passenger department	29,656.65
Maintenance freight department	16,476.63
Maintenance boat department	36,793.22
Maintenance power house	12,739.03
General expenses	35,030.74
Total operating	$175,051.28
Net earnings from operations	$ 91,019.56
Interest and discount	46,479.64
Surplus for year applicable for dividends	$ 44,539.92
Percentage total operating to total earnings	65%

Number of passengers carried in 1906: Main line, 920,048; local line, 392,554; Wesley Park line, 755,585; Navigation Co., 98,915; total, 2,167,102.

The directors and officers for the current year are: President, F. Nicholls; Vice-President, E. R. Wood; Secretary-Treasurer, Æmilius Jarvis; Assistant Secretary-Treas., C. E. A. Goldman; other directors: D. D. Mann, Z. A. Lash, H. G. Nicholls.

Grain Elevator Notes.

The Northern Elevator Co. is building an elevator at Bender, Sask.

The British American Elevator Co. is considering a proposal to construct an elevator at Markaroff, Man.

The Prairie Milling Co. has been formed at Alameda, Man., and will erect a grist mill and an elevator there.

Proposals are under consideration for the construction of elevators at Melfort, Beatty Siding and Wentworth Siding, Sask.

The Saskatoon Milling and Elevator Co. is arranging to build a 100,000 bush. elevator in connection with its proposed new 500 barrel flour mill at Saskatoon, Sask.

The Society of Equity, an organization in Alberta, is reported to have contracted for the immediate erection of 120 grain elevators at different points in the prairie provinces.

A contract has been let to John S. Metcalf Co., Chicago, Ill., for the erection of an additional grain elevator at Tiffin, Ont., for the Grand Trunk Pacific Elevator Co., Ltd.

Two elevators are under construction on the line of the Midland Ry. of Manitoba at Carman, Man., one for McCabe Bros., Duluth, Minn., and the other for the Minneapolis Milling Co.

A proposition is under consideration for the erection of six elevators at different points on the shores of Lost Mountain Lake, Sask., in the event of its being opened up for navigation.

The Export Elevator Co., by supplemental letters patent, has been granted permission to decrease its capital from $500,000 to $389,800. The company carries on business under a Manitoba charter.

We are advised that it is the intention of the C.P.R. to rebuild Elevator D at Fort William, Ont., but an appropriation for the work has not been provided, and no contract for the work has been let.

The building developments in sight for the current year at Fort William, Ont., include elevators for the G.T. Pacific Ry., Consolidated Elevator Co., Ogilvie Milling Co., and Muirshead and Black.

The Canadian Elevator Co.'s elevator at Yorkton, Sask., collapsed May 2, and the 30,000 bush. of grain in storage were spread over the C.P.R. line. The whole of the north wall of the structure fell outwards.

The working house at the C.P.R. elevator D., Fort William, Ont., which was burned in the fall of 1906, is to be rebuilt, and the elevator itself is to be given an overhaul. The new working house is to have a capacity of 200 cars a day, about three times its old capacity.

The Estevan Farmers' Elevator and Trading Co., and the Hitchcock Farmers' Elevator, Trading and Supply Co., have been incorporated at Regina, Sask., under the Northwest Territories Ordinance respecting joint-stock companies'.

We are advised that the G.T. Pacific Ry. is receiving tenders for the construction of a large grain elevator at Fort William, Ont., and that until a contract is entered into, it will be impossible to give any definite information as to the dimensions of the structure.

The Montreal Harbor Commission has decided to add to the elevator facilities at the harbor by securing a fleet of 12 floating elevators and operating them in connection with its shore storage elevator. At present the Montreal Warehousing Co. operates a number of floating elevators in the harbor.

An elevator to have a capacity of 80,000 bush. is to be erected during the summer at Carstairs, Alta., by the Canadian Society of Equity. The local branch of the society has as officers: President, H. W. Wood; Secretary and Treasurer, M. R. Shantz; Corresponding Secretary, J. W. Simons, and these will have the management of the elevator.

The Montreal Harbor Commissioners have passed the following by-law: "No floating elevator shall be moved within the limits of the harbor under her own steam, without having on board a captain holding a master's minor waters certificate, and an engineer holding a third-class engineer's certificate." This by-law has been approved by an order-in-council.

T. Meredith & Co. is the title of a company incorporated under the Manitoba Companies' Act, with a capital of $1,000,000 and offices at Winnipeg, to carry on a number of businesses, including the construction and operation of grain elevators and flour mills. The provisional directors are: T. Meredith, W. W. Fraser, M. J. Armington, J. H. Nelson, and H. A. Robson, Winnipeg.

The Franklin Realty and Trading Co. has been incorporated under the Dominion Companies' Act, with a capital of $90,000 and offices at Nokomis, Sask., to carry on a number of businesses, including the ownership and operation of grain elevators and warehouses. The provisional directors are: A. L. Lockerby, T. H. Flett, G. C. Bowie, Montreal; S. A. Beman, A. C. Allison, Malone, N.Y.

The National Canada Land Co. has been incorporated under the Manitoba Companies' Act, with a capital of $100,000 and offices at Winnipeg, for the purpose of engaging in a variety of operations in connection with the development of the country, including the erection and operation of flour mills, grain elevators and warehouses. The provisional directors are: J. P. Jansen, C. J. Classen, T. L. Metcalfe, E. E. Sharpe, Winnipeg; and Hon. P. Jansen, of Jansen, Nebraska.

The Canadian Consolidated Flour Mills is the title of a company incorporated under the Manitoba Companies' Act, with a capital of $1,000,000 and offices at Winnipeg, for the purpose of dealing in all kinds of farm produce and in connection therewith to own and operate grain elevators, warehouses and flour mills, as well as a number of other industries. The provisional directors are: J. Innes, Hartney, Man.; V. Schwalm, Glenboro, Man.; P. Broadfoot, Gladstone, Man.; G. R. Wilson, Arden, Man.; J. H. Davidson, Neepawa, Man.; T. C. Bullock, Crystal City, Man.; C. C. Smith, Carnduff, Sask.

The Lake Champlain Transportation Co. has purchased the tug Peerless at New York, and will bring her to the lake via the Gulf of St. Lawrence and the Richelieu River.

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MARINE DEPARTMENT.

Statistics of Canadian Shipping.

The total number of vessels remaining on the register books of the Dominion Dec. 31, 1906, including old and new vessels, sailing vessels, steamers and barges, was 7,512, measuring 654,179 tons register tonnage, being an increase of 187 vessels, and a decrease of 15,646 tons register, as compared with 1905. The number of steamers on the registry books on the same date was 2,810, with a gross tonnage of 375,263 tons. Assuming the average value to be $30 a ton, the value of the registered tonnage of Canada, Dec. 31, would be $19,625,370. Following is a summary showing the number of vessels and their tonnage by provinces:

	Sailing Ships and Steamers.	Steamers.	Gross Tonnage of Steamers.	Net Tonnage of Sailing Ships and Steamers.
Nova Scotia	2,159	212	25,159	187,328
Ontario	1,978	1,401	162,234	180,340
Quebec	1,344	406	89,973	143,340
New Brunswick	939	150	12,480	44,471
British Columbia	782	507	70,730	77,746
P. E. Island	149	16	3,923	10,761
Manitoba	149	107	8,138	8,341
Yukon District	11	10	2,485	1,763
Saskatchewan	1	1	141	89
Grand Total	7,512	2,810	375,263	654,179
Total, 1905	7,325	2,654	362,888	669,825

Alberta remains the only province in which no provision has been made for the registration of vessels. The ports of registry are distributed as follows: Ontario, 38; Nova Scotia, 21; New Brunswick, 7; Quebec, 6; British Columbia, 3; Prince Edward Island, Manitoba, Saskatchewan and Yukon, 1 each.

The ports having a net tonnage of 10,000 tons and over are:

	Vessels. Steam.	Sailing.	Net tonnage.
Montreal, Que	244	394	99,502
Victoria, B.C.	138	107	43,676
Windsor, N.S.	14	86	40,424
Quebec, Que.	151	485	39,394
Toronto, Ont.	301	88	33,847
Ottawa, Ont.	234	158	30,893
St. John, N.B.	82	257	28,558
Lunenburg, N.B.	9	300	26,593
Vancouver, B.C.	272	99	23,886
Parrsboro, N.S.	5	100	22,681
Halifax, N.S.	79	347	21,347
Kingston, Ont.	116	72	19,809
Yarmouth, N.S.	27	270	17,103
Maitland, N.S.	1	21	11,151
St. Catharines, Ont.	60	37	10,885
New Westminster, B.C.	97	69	10,184

The largest vessels on the register are:

STEAM.

Name.	Home Port.	Tonnage. Gross.	Regis.	h.p.
Bessie Dollar	Victoria, B.C.	4,329	2,798	244
Hazel Dollar	" "	4,304	2,804	241
Montreal	Montreal, Que.	4,282	2,299	386
M. S. Dollar	Victoria, B.C.	4,216	2,674	202
Midland King	Midland, Ont.	3,965	2,450	151
W. D. Matthews	Collingw'd, Ont.	3,965	2,450	151
Huronic	" "	3,330	2,211	245

SAILING.

Name.	Home Port.	Rig.	Regis. T'n'g'e
Agawa	Sault Ste. Marie.	Barge	3,308
Lord Wolseley	Victoria, B.C.	"	2,454
Everett G. Griggs	" "	Bktine	2,351
Canada	Windsor, N.S.	Ship	2,137
Kings County	" "	"	2,061
Lord Templetown	Victoria, B.C.	Barque	2 048

The steamer Wyefield, 3,235 tons gross, was removed from the register while the list of vessels for 1905 was going through the press. The ship Canada is a new sailing vessel on the register of over 2,000 tons. The names of 22 vessels were changed, and the register of 71 vessels were closed during the year. Of these latter the causes assigned for the closing af the register were: Broken up, 23; wrecked, 11; transferred to St. Johns, Nfld., 9; lost, 8; transferred to Bridgeton, Barbardoes, 5; stranded, 4; sold to foreigners, 4; burnt, 3; condemned as unseaworthy, missing, abandoned at sea and sunk by collision, one each.

The number of new vessels built and registered during 1906 was 397, measuring 21,741 tons register tonnage. Estimating the value of the new tonnage at $45 a ton, it gives a total value of $978,345 for new vessels. The new vessels were built and registered as follows:

	Vessels.	Tons.
Nova Scotia	154	7,538
British Columbia	82	2,774
Ontario	74	6,014
Quebec	50	3,940
New Brunswick	23	431
Manitoba	9	808
Prince Edward Island	4	147
Saskatchewan	1	89
Yukon District	....	....
Total	397	21,741
Total for 1905	352	19,781

The names, dimensions, etc., of these vessels were published in our columns from month to month, and lists are being published of the vessels registered during the current year.

Lake Freight Matters

Our Winnipeg correspondent wrote May 15: "The late opening of navigation to Lake Superior has had a decided strengthening influence on the freight market, as large numbers of U.S. boats that usually make one or two trips in the grain trade before entering on their ore contracts, were this season compelled to immediately commence on the ore, with the result that grain rates from Port Arthur and Fort William to Buffalo were forced up from 2c. to 2¼c., with tonnage scarce at that figure, and as most of the Canadian Georgian Bay tonnage had been tied up for the long trip to Kingston for two trips, and in some cases three trips, the effect was to mark rates up all around, and where bay tonnage for the opening had been chartered at 2c., later trips were made at 2¼c., and the present indications are that the Canadian fleet will be kept profitably employed in the grain trade until the 1907 crop commences to move, and owing to conditions on the U.S. side of the line a greater volume of coal will also move in Canadian bottoms than in former years, so taking it from all standpoints, the outlook for a prosperous season for the Canadian fleet is most encouraging.

The increase in the Canadian grain fleet has not probably been noticed by others than those directly interested, and it may surprise the public to learn that the increase has been over 100% in three years, and with vessels now actually in service, en route from England and actually being built in Canadian shipyards, the fleet now amounts to some 65 vessels, with a capacity to Georgian Bay ports of 5,453,000 bush. a week, or at the rate of 779 cars a day, which is a greater amount than the western railways have yet been able to handle to the lake ports. Of course, a number of these vessels are capable of trading through the Welland Canal and to Montreal, in which case, instead of making a round trip per week, they take some 10 to 14 days for the return trip to Kingston, and three weeks to Montreal, which reduces the weekly capacity to about 4,500,000 bush., as the Montreal traders are mostly engaged in the package freight trade and return loaded. The Canadian fleet is now made up as follows, viz.:

S.S.	Fairmount	capacity 110,000	bushels
"	Rosemount	" 90,000	"
"	Westmount	" 110,000	"
"	Glenmount	" 110,000	"
"	Stormount	" 110,000	"
"	Advance	" 40,000	"
Bg.	Ungava	" 90,000	"
"	Melrose	" 50,000	"
"	Hamilton	" 65,000	"
"	Quebec	" 65,000	"
"	Winnipeg	" 45,000	"
S.S.	City of Montreal	" 32,000	"
"	City of Ottawa	" 32,000	"
"	Bickerdike	" 51,000	"
S.S.	Turret Chief	capacity 110,000	bushels
"	Turret Court	" 110,000	"
"	Turret Cape	" 110,000	"
"	Scottish Hero	" 127,000	"
"	J. H. Plummer	" 55,000	"
"	H. M. Pellatt	" 55,000	"
"	A. E. Ames	" 55,000	"
"	Nevada	" 50,000	"
"	Corunna	" 50,000	"
"	Morena	" 50,000	"
"	Midland Prince	" 285,000	"
"	Midland King	" 200,000	"
"	Midland Queen	" 105,000	"
"	Glenellah	" 120,000	"
"	Dundee	" 120,000	"
"	Donnacona	" 102,000	"
"	Strathcona	" 107,000	"
"	Winona	" 100,000	"
"	Neepawah	" 60,000	"
"	Wahcondah	" 60,000	"
"	Rosedale	" 82,000	"
"	Arabian	" 40,000	"
"	Seguin	" 45,000	"
"	Wasaga	" 55,000	"
"	Meaford	" 110,000	"
"	Collingwood	" 200,000	"
"	Turret Crown	" 110,000	"
"	Wexford	" 95,000	"
"	Simla	" 55,000	"
"	India	" 50,000	"
Bg.	Burma	" 58,000	"
S.S.	Huronic	" 65,000	"
"	Saronic	" 40,000	"
"	Doric	" 115,000	"
"	Ionic	" 45,000	"
"	Majestic	" 25,000	"
"	Manitoba	" 40,000	"
"	Athabasca	" 30,000	"
"	Alberta	" 30,000	"
"	Ottawa	" 110,000	"
"	W. D. Matthews	" 200,000	"
"	Iroquois	" 120,000	"
"	Algonquin	" 95,000	"
"	Edmonton	" 100,000	"
"	Haddington	" 73,000	"
"	Neebing	" 107,000	"
"	Leafield	" 76,000	"
"	Paliki	" 75,000	"
"	Agawa	" 200,000	"
Bg.	Barlum	" 80,000	"
"	Cataract	" 42,000	"

Icebreaking on Thunder Bay.

Port Arthur and Fort William have had a peculiar experience this season. On April 10 the icebreaking tug James Whalen left Port Arthur for Fort William, breaking through ice 24 to 32 inches thick. At the mouth of Kaministikwia River, the ice was windrowed to a depth of 6 or 8 ft. and dynamite had to be used. On the morning of April 11, the steamers Murch and Bixby were placed for loading grain, and the James Whalen returned to Port Arthur. During the night the channel cut froze up so hard that on April 12 teams were driven across it. The tug was then set to work to cut a channel to open water in the lake. Ice from 24 to 36 in. in thickness was broken, and dynamite was used where the ice was windrowed. On April 28 the steamers were sighted coming from Sault Ste. Marie and the James Whalen piloted the following steamers into port: Midland Prince, light; Martin Mullen, Harry Coulby, Matthew Andrews, H. B. Hawgood and Saturn, with coal; and the Midland Queen, light. The captains of these steamers have put on record their appreciation of the services of the tug, and the Port Arthur Board of Trade in commenting upon the fact, and in urging the granting of a subsidy by the Dominion Government to the tug for a term of years for icebreaking services, set forth that in the ordinary course of events it was not expected that navigation would have been opened until May 24, that within four days of the opening of navigation 42 vessels of 192,550 tons arrived and departed with full cargoes. The stormy weather which subsequently prevailed drove the ice back, with the result that from May 11 to May 16 all traffic was suspended. Sixteen vessels, which had been tied up in the vicinity of Welcome Island, were piloted in through a channel broken by the James Whalen. The head of the lakes port has therefore been opened up twice this season.

The G.T.R. has filed its local standard passenger tariff no. 7, C.R.C., no. E 485, on a basis of 3c. a mile, which tariff cancels C.R.C. no. E 1.

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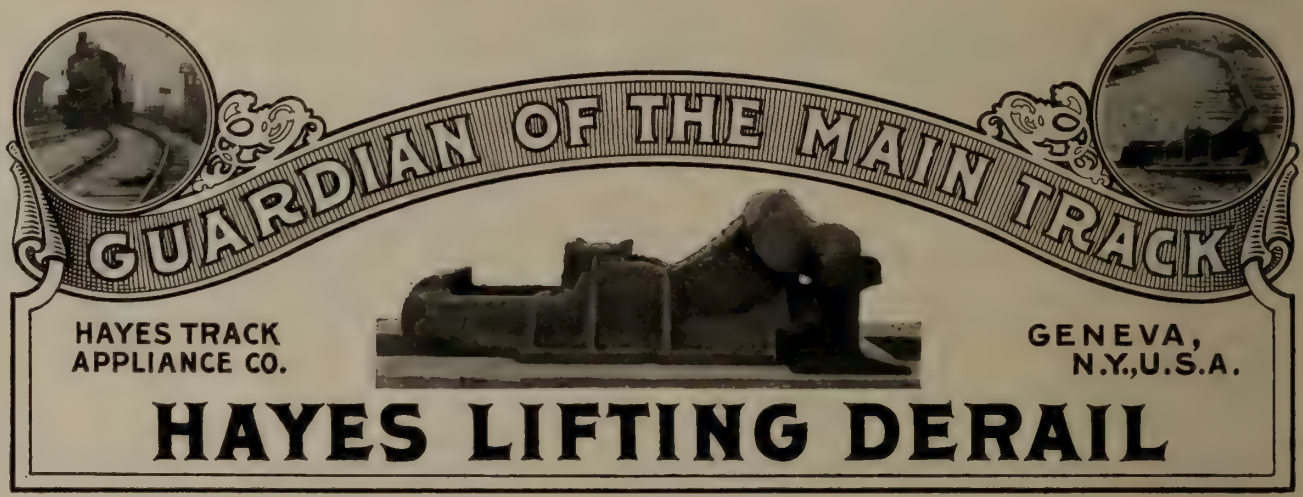

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Atlantic and Pacific Ocean Marine.

N. Lachance, for 36 years in the employ of the Allan Line, as a pilot on the St. Lawrence, died at Quebec recently, aged 76.

The S.S. Victoria, one of the steamers engaged in the new Vancouver-Mexico line, was reported ashore off Coronado, Cal., May 7.

Capt. Lauder, at one time chief officer of the C.P.R. S.S. Milwaukee, has retired from the marine service and has purchased a farm about 20 miles west of Edmonton, Sask.

The first over-sea steamer to arrive in the St. Lawrence was the Donaldson Line S.S. Marina from Glasgow, April 27, and she with the Allan Line S.S. Hibernian reached Montreal May 2.

The Allan Line S.S. Victorian, sailing from Montreal Mar. 24, called for mails off Sydney, N.S., and it is announced that mail steamers leaving Montreal, up to July 4, will call for mails at that port.

We have been advised by Donaldson Bros., Glasgow, Scotland, that they are not at present building another steamship for their Canadian trade, as press reports referred to in our last issue recently stated.

A recent press despatch from London, Eng., stated that the G.T.R. opened up negotiations with the White Star Line with a view of securing three of its steamships to open up a line between Liverpool and Montreal.

Nothing has been done with the wreck of the S.S. Bavarian now lying ashore at Indian Cove, Que. The engineers who had charge of the floating operations at Wye Rock, are consulting as to what is best to be done.

The Furness Line service between Halifax, N.S., and London, Eng., is to be strengthened by the addition of the steamships Rappahannock, Shenandoah, and Kanawha. The latter made her first trip to Halifax early in May.

J. T. Piper, for many years engaged on the Allan Line passenger staff at Quebec and Halifax, N.S., died at Quebec recently. He was a brother of Mrs. Lambkin, wife of the Assistant General Passenger Agent Intercolonial Ry., Halifax.

The Shipping Federation reports that desertions of seamen from trans-Atlantic vessels are becoming very common at Montreal. The blame for this is chiefly laid at the door of employment agents who tempt the crews to desert by the offer of higher wages.

The Allan Line, it is reported from Glasgow, Scotland, has placed an order for a 10,000 ton steamer similar to the Corsican, described in another column, for its Glasgow-Montreal service. The new steamer will be named the Hesperian, and is to be ready for service by May, 1908.

The Minister of Marine met a committee of Lloyds in London, Eng., May 17, and discussed the question of insurance rates for trans-Atlantic steamships using the St. Lawrence route. He described fully what the Dominion Government was doing with a view to making the route a thoroughly practicable and safe one.

Early in 1908 the new service between Vancouver and Great Britain via Australia and New Zealand will be put in operation. The new line is being subsidized by the Australian Government. It is proposed to give a sailing every three weeks from Great Britain to Vancouver direct, by way of the Suez Canal, Australia and New Zealand.

Speaking at the annual meeting of the British Iron and Steel Institute May 9, Sir Hugh Bell, the President, said it was not at all incredible to forecast that a century hence a ship with hardly any machinery or crew would speed across the Atlantic propelled by electric force generated by Niagara Falls and transmitted to the vessel wirelessly.

An official announcement was made by the Dominion Line in Liverpool, Eng., May 6, that an order had been placed in Belfast, Ireland, for the construction of another 14,000 ton twin-screw steamer for the Liverpool-Canada trade. The new steamer will be similar in size to the Alberta, now being built, will have a speed of 16 knots an hour, and it is reported will be named Albany.

The Shipping Federation of Canada has issued a signalling code for use at sea to communicate the ice conditions between vessels navigating the straits of Belle Isle. It has been prepared by Capt. W. H. Logan, of the Furness Line, and has been generally approved of by shipmasters. The circular gives instructions for using the code by day and night, and the code itself is divided into two sections: (1) Belle Isle to Point Amour; (2) Belle Isle to the 50th meridian.

The last sailing from St. John, N.B., of the winter port season was the C.P.R. S.S. Montreal, May 6. The statistics of the winter's trade show: value of freight handled, $19,387,300; grain shipped, 3,349,162 bush. import and export freight handled by C.P.R., 28,908 carloads; passengers landed, 30,025. The C.P.R. steamers with 37.7% of the sailings carried 65% of the outward freight; the Allan Line steamers with 17% of the sailings 12%, and the other lines with 28% of the sailings carried 13% of the outward business.

At the meeting of the Colonial Conference in London, Eng., May 14, Sir W. Laurier submitted a resolution favoring the establishment of a new mail route from Great Britain to Australia and New Zealand by Canada. The home port, it is suggested, shall be at Liverpool, but Bristol and Southampton shipping interests are desirous of putting in a claim for the terminals. The project is viewed favorably in many quarters, but an opinion is expressed that the amount of subsidy required will be larger than the benefits which will accrue to the participating countries.

A strike of longshoremen at Montreal, May 15, practically tied up trade at the harbor. There were 60,000 tons of freight lying at the sheds and 18 steamers lying alongside on May 14. The Department of Labor has been appealed to, and the question is under consideration as to whether the strike does not come within the terms of the act passed last session, which provides for the imposition of fines and imprisonment for leaving work before any matter in dispute be investigated by a board of conciliation. The members of the Shipping Federation applied for the appointment of such a board May 14, and the longshoremen later. The strike however collapsed May 23.

The English Court of Appeal has reserved judgment in the case of Tasker & Co. against Allan Bros. & Co. The action arose out of the freight charges of a consignment of flour from Milwaukee, Wis., to London, Eng., by the S.S. Hibernian. The Hibernian went ashore at Stormy Point, Nfld., and 366 bags of the 1,500 bags of flour forming the consignment were damaged and sold. The remaining 1,134 bags were transhipped and duly delivered, and the question in dispute was as to the freight charges, the plaintiffs alleging they had been overcharged £14 8s. 3d. The bills of lading provided for a through freight, and the plaintiffs contended they were to pay on the freight actually delivered, and were not liable for the inland charges on the portion of the consignment which was sold as damaged.

The Canadian Lake Line str. Morena, with a cargo of pig iron for Toronto, ran on the rocks near Cape Race, Nfld., May 19, and tore the bottom of the hull out. The vessel, which was on her way out from Great Britain to take up her new run between Montreal and Port Arthur, Ont., was fully insured.

The Steamboat Deerhound.

The Post Office Department has purchased in England the str. Deerhound, formerly owned by the West Cornwall Steamship Co., and engaged in the passenger, mail, and freight (mainly early vegetables and cut flowers) trade between the Scilly Isles and Penzance, Cornwall, for use as a mail tender at Rimouski, Que. The Deerhound is a steel twin screw steamer, 483 tons gross, 39 tons register, built and engined in Birkenhead in 1901. Her dimensions are: length, 189 ft.; breadth, 26.1 ft.; depth of hold, 9.5 ft.; draught, 8 ft. 6 in. She is fitted with triple expansion engines, cylinder, 16, 24 and 38 in. diameter by 24 in. stroke, steam being supplied by two return tubular boilers, at 160 lbs. pressure. On a consumption of one ton of Welsh coal an hour she steams 14 to 15 knots an hour and with forced draught will make 16 knots. The hull is divided by five watertight bulkheads; there are two decks, the promenade one being 139 ft. long; and there are dining and ladies' saloons. Electric lights is fitted throughout; steam steering gear is provided and there are capstans fore and aft She is reported to be an excellent seaboat.

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Maritime Provinces and Newfoundland.

Navigation on the St. John River, N.B., was opened April 29.

The Mahone Bay, N.S., schooner Bretwelda has been bought for St. Jacques, Nfld., owners.

The str. Beatrice, wrecked off Cranberry Head, N.S., in the fall of 1906, has been sold to J. C. Larder, for breaking up.

An order-in-council has been passed approving of by-laws for the pilotage district of Hillsboro and Hopewell, N.B.

The three-masted schooner Island City, owned in Moncton, N.B., which left Chatham, N.B., Nov 28, 1906, for New York, has been given up as lost.

The Charlottetown Navigation Co.'s str. Empress made her first trip for the season between Prince Edward Island and the mainland, May 3.

One of the last of the Charlottetown, P.E.I., fleet of square-rigged sailing ships, the Charles E. Lefurgey, was sold at Gulf Port, Miss., recently for $475.

Capt. Reid has purchased the str. Donzella in Great Britain for the coal trade, and was in charge on the voyage out. The steamer arrived at Halifax April 30.

The name of the schooner Mahone Packet, official number 116,524, registered at Lunenburg, N.S., has been changed by order-in-council to that of Olive Evans.

The Plant Line str. Halifax has returned to Halifax, N.S., from Key West, Fla., from which port she had been running during the winter. She went on the Halifax-Boston run May 1.

The Stetson, Cutter Co. of St. John, N.B., has purchased the tug Help from Capt. G. W. Brooks of Liverpool, N.S., and will use her in log towing for the pulp mills at Mispic and Union Point.

The Newfoundland Legislature at its recent session granted the following sums for additional steam services: Fogo district, $4,375; Northern Coastal service, $1,750; Bell Island, $500.

The str. Universe, running between Louisbourg, N.S., and New York, with coal, while returning to the former port in ballast, struck on White Point, N.S., April 25, and has since become a total wreck.

No tenders having been received for floating the stranded str. Turret Bell, Lloyds' agents are now offering the wreck for sale. The Turret Bell ran on the rocks at Cable Head, P.E.I., during a storm in the fall of 1906.

The Newfoundland Legislature at its recent session passed votes amounting to $32,489 for salaries of lighthouse keepers, $29,760 for the maintenance of lights and $4,000 for contingencies connected with the service.

A proclamation declares the port of Amherst, N.S., to be a port to which Part 12 of the Canada Shipping Act, chap. 113 of the Revised Statutes of 1906, shall apply, and F. A. Cotes has been appointed harbormaster.

The Newfoundland Legislature at its recent session passed an act respecting the whaling industry, which provides among other things that tow boats shall not be used in the prosecution of the industry under a penalty of $200 for each offence.

The Three Rivers Steamship Co., Georgetown, P.E.I., is having built at Shelburne, N.S., a steamer to take the place of the Electra. The vessel was launched April 26, and was taken to Yarmouth, N.S., for her engines, The principal dimensions are: length, 120 ft.; breadth, 25 ft.; depth of hold, 9 ft.

By an act passed at the recent session of the Newfoundland Legislature, schedule B attached to Chap. 118 of the Consolidated Statutes, entitled "Of Newfoundland Lloyds Classification and the Encouragement and Improvement of Shipbuilding," is repealed, and a new schedule is enacted. The schedule deals with the specifications of vessels claiming bounty and local class.

A pilotage district has been established for the Basin of Minas, N.S., the limits being south of a line drawn from Cape Blomidon to the south extremity of the largest of five islands in the county of Colchester, and thence to Cape Tenny. The following have been appointed pilotage commissioners for the district: Capt. W. R. Potter, Canning, N.S.; Capt. S. Smith, Lockhartville, N.S.; B. Borden, Avonport, N.S.

The str. Sygna, built recently at Middlesbrough, Eng., for charter by the Dominion Steel Co, Sydney, N.S.; arrived at that port, April 28. She is constructed on the cantilever system, which dispenses with all beams, pillars, webframes, etc., and is fitted with waterballast tanks, carried alongside under the deck on each side. She is practically of the same dimensions as the Christian Knudsen, described and illustrated in our issue of Jan., 1906.

The Nova Scotia Steel and Coal Co. has the following steamers under charter for its ore trade: Othello, 6,600 tons; Hero, 6,600 tons; Storford, 6,000 tons; Agnar, 2,450 tons; and the following for its coal trade: Wegedesk, 7,500 tons; Hermes, 6,700 tons; Somerstadt, 6,600 tons; Otta, 5,500 tons; Oscar II, 5,500 tons; Wagush, 5,500 tons; Bjorgvin, 4,400 tons; Aarstein, 2,450 tons; and Pors, 900 tons. The company's own steamers Woburn and Wasis will also be operated in these trades.

The Gloucester Navigation Co., which has been incorporated in New Brunswick, has a capital of $40,000 and offices at Caraquet, N.B., and proposes to engage in the navigation business on the Caraquet shore of the province. It is stated that $12,000 of the capital has been subscribed, and an arrangement has been made to purchase a steamer at St. John, N.B., for $4,500. Provincial and Dominion subsidies are being arranged for the service. The officers of the company are: President, Dr. A. Sarmany; Vice-President, Dr. F. X. Comeau, Secretary-Treasurer, P. P. Morais.

The following appointments have been made by the Dominion Government: Capt. M. Daly, harbormaster for Bathurst, N.S.; H. Thorpe, wharfinger at Chipman's Brook, N.S.; B. C. Knock, shipping master at Lunenburg, N.S.; Capt. Thos. Townsend, Secretary and Treasurer of the pilotage authority of Lunenburg, N.S. Capt. Thos. King, portwarden at Windsor, N.S.; S. Smith, wharfinger at Port Greville, N.S.; I. Beach, harbormaster at Port Greville, N.S.; A. Cheney, harbormaster at Whitehead, N.B.; J. W. Worster, harbormaster at Seal Cove, N.B.; T. Ingalls, Sr., harbormaster at Grand Harbor, N.B.

The Port Hood Richmond Ry. Coal Co. during the current season of navigation will utilize four or five steamers for the transportation of coal from its mines at Port Hood, N.S. It has purchased the James Irwin, 330 tons (which arrived from Liverpool, Eng., April 28); and expected to purchase another steamer of about 350 tons register in Great Britain, by the end of April. It has also chartered the Garibaldi, of 1,000 tons, and will charter other vessels as required. The steamers will carry return freight between Halifax and Port Hood on the one hand, and Prince Edward Island and New Brunswick ports on the other.

By an order-in-council the second section of the by-laws of the pilotage authority of St. John, N.B., has been repealed, and a new section substituted. The section deals with the qualifications necessary to eligibility for license as a pilot in the district as follows: "Every person not already licensed applying to be licensed as a pilot for the pilotage district of St. John, must make application to the Secretary at the office of the pilotage authority (on the printed form) and be a resident of the city or county of St. John, of not less than 21 years of age, and shall have continuously served, as an indentured apprentice (approved by the pilotage authority) in a licensed pilot boat, for a term of not less than five years, and shall have made two round voyages to Europe and back, or one round voyage to South America and back, as an articled seaman in either full-rigged vessels or steamships, in the discretion of the pilotage authority, and shall produce certificates from the masters of the vessels in which he made the voyages as to his capability as a seaman; also a certificate of good character while serving his apprenticeship from the pilot to whom he was indentured, and shall be examined before examiners appointed for that purpose by the pilotage authority, and at that examination shall answer such questions and show such fitness as will warrant them in giving him a certificate of his competency to perform all the duties of a pilot in the pilotage district; and a license shall forthwith issue to such person, on payment of the expense of such examination and a fee of $5."

Province of Quebec Marine.

The Quebec Superior Court has decided that the bed of the Magog River belongs to the Crown, the river being a floatable one.

The name of the steamer Garnet, official number 112,270, registered at Montreal, has been changed by order-in-council to Emerald.

The iron ship Dybrag, which was wrecked off Escoumains, in the fall of 1906, has been purchased by F. Gunn, Montreal, and is being broken up.

Navigation on the St. Lawrence River was opened April 24, and on April 30 water was let into the Lachine canal, and the inland season of navigation of 1907 opened.

The Department of Railways and Canals has under consideration tenders for the removal of shoals and the improvement of the channel west of the upper entrance to the Galops canal.

The Richelieu and Ontario Navigation Co.'s new str. Rapids King was given a trial trip in Toronto May 10. She left a few days later to take up her run through the St. Lawrence rapids to Montreal.

The Department of Marine does not propose at present to purchase a steamer to patrol the buoys, and perform service as a lighthouse tender on the St. Lawrence River, but will use one of the Government steamers for the purpose.

The Quebec Steamship Co. has sold its str. Caribbee, exMerionethshire to D. Bacon, New York. She was built at Glasgow, Scotland, 1878, and since she was bought from the Shire Line has been running for the Q.S. Co. out of New York.

The Montreal Harbor Commissioners are suing the owners of the str. Albert Marshall to recover $50,000 for the loss of one of their dredges sunk in a collision in Oct., 1906. Justice Dunlop presided and Capt. J. J. Riley acted as nautical assessor.

The Quebec Board of Trade has passed a resolution asking the Dominion Government to abolish all harbor dues, including hospital dues, now prevailing against shipping visiting the port of Quebec, thereby placing the port on an equal footing with Montreal.

The Richelieu and Ontario Navigation Co.'s str. Quebec has been moved from Sorel to Montreal, where the fitting and decoration will be completed. It is expected that

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she will be completed and ready for her run between Montreal and Quebec July 1. Capt. A. Baker, of Quebec, has been appointed master.

Following are the officers and directors of La Compagnie de Navigation de Quebec for the current year: President, J. D. O. Picard; Vice-President, J. S. Matte; Treasurer, Thos. Duchaime; other directors: J. E. Sampson, L. A. Hudon, J. Beaudry, E. Cloutier, N. Portier, L. Beaubien, J. D. Marier.

The Minister of Marine is visiting the Baltic Sea, where ice crushing steamers are operated yearly to keep navigation open during the winter, with a view of gathering information that may be useful in perfecting designs for two additional ice crushing steamers which the department proposes to order for the St. Lawrence.

The engineers of the Department of Railways and Canals will investigate during the current summer the question of the construction of dams on the Ottawa River to conserve a steady flow of water during the dry season. It is claimed that every additional foot of water in the upper reaches of the Ottawa River adds three inches to the depth of the water in Montreal harbor.

The North Shore Transportation and Wreckage Co. is having the str. Polino overhauled and generally improved and redecorated. It was expected that the steamer would be put on the run between Montreal and Natashquan by the end of May, the officers being: O. C. Bernier, master; and U. Lacroix, chief engineer. It is proposed to have the steamer renamed Natashquan.

The Battle Island Transportation Co. has been incorporated under the Dominion Companies' Act, with a capital of $18,000 and office at Montreal, to carry on the business of forwarding and transporting goods and passengers on the rivers, lakes and waters of the Dominion of Canada; and to acquire steam and other vessels, or shares in companies owning the same. The provisional directors are: G. L. Wells, R. B. Hunter, T. Hunter, G. T. Webb, Fulton, N.Y.; and A. H. Lomer, Montreal.

The boundaries of the harbor of Saut au Mouton, Que., have been declared to include all the waters of the St. Lawrence River east of the eastern extremity of the most easterly Esquamine islet, west of a line drawn southeast from the extremity of Mille Vaches point, and north of a line drawn parallel to the shore line and at a distance of three marine leagues therefrom, together with all navigable waters emptying into this area. C. E. Holet has been appointed the first harbormaster.

The Canada-Bahama Fruit and Development Co. has been incorporated under the Dominion Companies' Acts, with a capital of $300,000 and offices at Montreal, with power among other things to carry on the business of shipowners and charterers, and of carriers and forwarders, of fruit, produce and merchandise of all kinds, and to make contracts for the carriage of mails, passengers, goods, wares and merchandise either in its own vessels or otherwise. The provisional directors for the purpose of incorporation are: V. E. Mitchell, E. F. Surveyor, J. W. Weldon, E. M. McDougall, S. J. LeHuray, of Montreal.

The New York State Assembly has passed an act providing for the incorporation of the Long Saulte Development Co. The act authorizes the company to construct and maintain dams, canals, power houses, and locks at or near Long Saulte Island, for the purpose of improving the navigation of the St. Lawrence River, and developing power from the water thereof, to construct and maintain a bridge, and carry on the manufacture of commodities. The matter is being considered by the International Waterways Commission. A. C. Davis, on behalf of the company, said the proposed works would render navigable a channel not now only open to vessels, and would give 45,000 h.p., against 4,000 h.p., which could be developed without the dams.

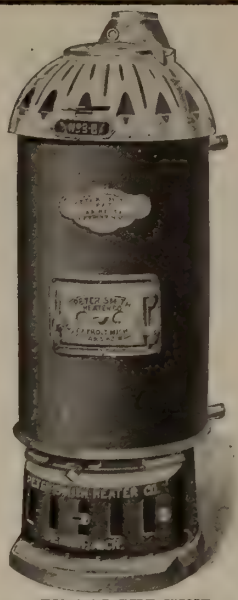
The Department of Marine and Fisheries has issued a notice to the effect that the provisions of the Canada Shipping Act, chap. 113 of the Revised Statutes of Canada, respecting the shipping and discharge of seamen on inland waters must be strictly observed on and after June 1. The act provides that the master must have a signed agreement with every seaman whom he carries as one of his crew.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM APR. 15, 1907, TO MAY 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Adoraim	122,325	Vancouver, B.C., 1907	Screw .8 N.H.P.	24.3	8.4	3.6	8.19	5.57	Vancouver, B.C.	Gustav O. Roedde, Vancouver, B.C.
Alkali	122,324	" " 1904	" 8 "	26.5	8.4	2.7	7.42	5.05	" "	Jas. D. Kirkpatrick, N. Vancouver, B.C.
Carl	122,330	" " 1907	" 4 "	16.4	5.4	2.6	1.30	0.89	" "	James S. Rear, Vancouver, B.C.
C. C. Martin	116,670	Twelve M.Bay, P'yS'd, 1906	" 15 "	71.0	16.0	8.0	70	45	Midland, Ont.	Mary Matin, Midland, Ont.
Dauntless	121,952	Port Bruce, Ont., 1907	" 3 "	47.6	11.9	6.0	23	16	Port Stanley, Ont.	Edwin Small, Port Bruce, Ont.
D. W. Crow	90,530	Chatham, Ont., 1902	" 6½ "	63.0	13.0	6.0	31	18	Chatham, Ont.	Daniel W. Crow, Chatham, Ont.
Eagle	121,981	Eagle Harbor, Wash., 1900	" 6 "	53.8	15.5	5.5	36	17	Victoria, B.C.	Queen City Trad. & Trans. Co. Ltd., Victoria.
Etta	122,116	Sydney, N.S. 1907	" 10 "	30.0	8.5	4.0	7	5	Sydney, N.S	Albert Alman, Sydney, N.S.
Grace	122,124	Tancook, N.S., 1907	" 6 "	57.6	12.5	6.2	25	17	Halifax, N.S.	John W. Smith, Halifax, N.S.
Hy. D. Davis	122,026	Liverpool, N.S., 1907	" 4½ "	57.30	18.1	7.6	38	38	Liverpool, N.S	Duncan C. Mulhall, Liverpool, N.S.
Joe	122,322	Everett, Wash., 1906	" 1.06 "	27.0	8.2	4.0	5.15	3.51	Vancouver, B.C.	George A. Walkem, Vancouver, B.C.
John Owen	117,039	Detroit, Mich., 1874	" 69 "	136.3	25.0	11.8	439	230	Sault Ste. Marie, Ont.	Joseph Ganley, Sault Ste. Marie, Ont.
Kenora	122,326	Vancouver, B.C., 1906	" 2.3 "	31.2	9.0	4.0	13	8.90	Vancouver, B.C.	Rat Portage Lumber Co., Limited.
Lena May	122,342	Penet'nguishene, Ont., 1906	" .5 "	35.0	7.6	3.8	7	4	Toronto, Ont.	Upper Ont. Steamboat Co., Ltd., New Liskeard, Ont.
Madge	121,984	Victoria, B.C., 1907	" 31 "	97.5	20.0	11.5	155	77	Victoria, B.C.	Brit. C. Marine Ry. Co., Ltd., Victoria.
Margaret	122,123	Sheet Harbor, Halifax, 1907	" 27 3 "	92.8	19.6	8.6	194	99	Halifax, N.S.	Halifax and Sheet Harbor Steamship Co., Ltd., Halifax, N.S.
Midl'nd Prince	116,669	Collingwood, Ont., 1907	" 136½ "	474.0	55.0	27.0	6636	5141	Midland, Ont.	Midland Navigation Co., Ltd., Midland.
Niobe	122,328	Vancouver, B.C., 1905	" 1 "	20.7	5.9	2.8	1.84	1.26	Vancouver, B.C.	Robert J. Spratt, Vancouver, B.C.
Nora	122,327	Pt. Madington, Wash., 1906	" 1.6 "	35.0	11.4	3.8	13	8.89	" "	Albert E. Brown, Vancouver, B.C.
Norfolk	97,108	Collingwood, Ont., 1907	" 10 "	62.0	14.0	6.0	32	22	Pt. Burwell, Ont.	Frederick W. Doty, Goderich, Ont.
Pearl	122,321	Vancouver, B.C., 1907	" .8 "	22.0	7.7	3.4	4.24	2.89	Vancouver, B.C.	James S. Emerson, Vancouver, B.C.
Prima	122,343	Toronto, Ont., 1898-1906	" 1 "	34.0	7.8	3.5	8	5	Toronto, Ont.	Upper Ont. Steamboat Co., Ltd., New Liskeard, Ont.
Prince Rupert	122,323	Vancouver, B.C., 1907	" .67 "	30.5	10.2	3.5	12	8.41	Vancouver, B.C.	John Davis, Vancouver, B.C.
Ruby L	122,148	Margaretville, N.S., 1907	" 16 "	90.0	20.4	8.6	119	49	Yarmouth, N.S.	Margaretville S.S. Co., Ltd., Margaretville, N.S.
Stroller	122,329	Vancouver, B.C., 1907	" 1.38 "	23.8	7.1	3.5	5.57	3.79	Vancouver, B.C	John S. Gall, Vancouver, B.C.
Thos. R. Scott	116,847		" 15 "	138.0	28.0	..	258	241	Owen Sound, Ont.	Peninsula Tug and Towing Co., Ltd., Wiarton, Ont.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM APR. 15, 1907, TO MAY 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Active	122,301	Lunenburg, N.S., 1907	Schr.	53.8	16.4	7.6	35	35	Lunenburg, N.S.	Frank Young, Pleasant Harbor, N.S.
Albata	122,302	" "	"	46.8	13.5	6.8	20	20	" "	Obadiah Deal, Lunenburg, N.S.
Alert	122,243	Georgetown, N.B., 1860	"	47.5	15.8	6.9	18	18	St. Andrews, N.B.	David J. Spear, Pennfield, N.B.
Alva	122,149	Clyde, N.S., 1907	Slp.	31.0	11.0	6.3	11	11	Yarmouth, N.S.	George H. Lyle, Port La Tour, N.S.
B. C. C. No. 3	121,982	Ladners, B.C., 1905	Bge.	49.5	18.3	5.0	53	49	Victoria, B.C.	British Columbia Canning Co., London, Eng.
B. C. C. No. 4	121,983	Ladner's, B.C., 1906	"	45.5	16.2	5.0	36	33	" "	" " " "
Earl Grey	122,009	Lunenburg, N.S., 1907	Schr.	94.2	24.7	10.2	105	95.53	Lunenburg, N.S.	Zwicker & Co., Ltd., Lunenburg, N.S.
Ena T	122,010	Tancook, N.S., 1907	"	42.9	12.4	6.6	17	17	" "	William Hubley, Indian Harbor, N.S.
Excelsior	116,846	Welland, Ont., 1906	Drge.	100.0	16.10	9.3	474	372	Owen Sound, Ont.	Owen S. Dred. & Con. Co., Ltd., O. Sound.
Fan. W. Freeman	121,900	Gloucester, Mass., 1884	Schr.	87.0	22.7	8.4	91	79	Shelburne, Ont.	George Irving, Rexton, N.B.
Hardy	122,341	Toronto, Ont., 1905	Drge.	66.0	19.3	5.0	94	63.69	Toronto, Ont.	Sand & Dredging Ltd., Toronto, Ont.
Iroquois	107,686	Montreal, Que., 1889	"	92.2	29 6	7.1	..	..	Prescott, Ont.	Gilbert Brass Eng. Co., Ltd., Montreal, Que.
Mary M. Lord	122,242	Lubec, Me., 1903	Schr.	50.6	16.2	7.1	21.26	21.26	St. Andrews, N.B.	Harley E. Ingersoll, Grand Manan, N.B.
R. H. Milford	122,233	Clark's Harbor, N.S., 1907	Slp.	33.0	11.7	5.6	12.55	12.55	Barrington, N.S.	Isaiah S. Newell, Clark's Harbor, N.S.
Ste. Anne	122,255	Ste. Anne de la Pocatiere	Schr.	49.6	16.5	6.4	28.36	28.36	Quebec, Que.	Auguste Lafrance, Ste. Anne de la Pocatiere.



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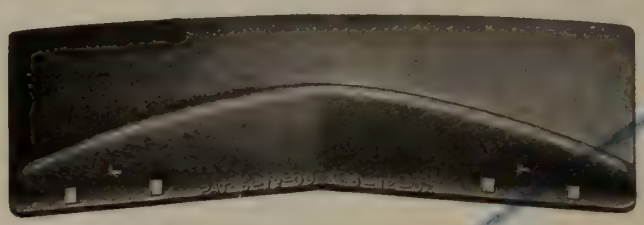

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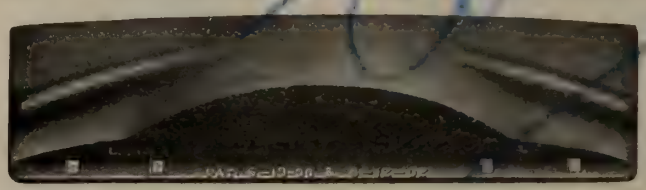

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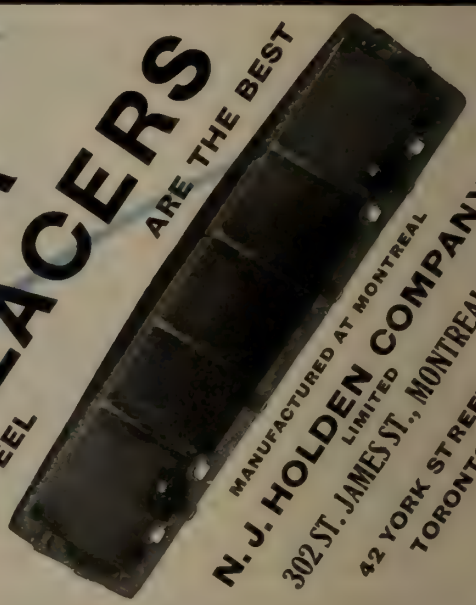

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Ontario and the Great Lakes.

W. J. Farrasy has been appointed agent at Cleveland, Ohio, for the Merchants' Montreal Line.

The Midland Prince, the Midland Navigation Co.'s new vessel, left Collingwood on her first trip April 23.

The str. Missisquoi of Rockport, Ont., has been refitted, and her boilers rearranged prior to the opening of navigation.

Jno. McNaughton, assistant superintendent of the U.S. canal, Sault Ste. Marie, Mich., died there of pneumonia, May 10.

The str. Argyle is reported to have been chartered to a U.S. company for the season to run to points on the south shore of Lake Ontario.

The str. Corunna of the Canadian Lake Line sailed from Middlesbrough Eng., April 25, with a cargo of 1,000 tons of pig iron to be discharged at Toronto.

Capt. E. B. Smith of the Lake Ontario and Quebec Navigation Co.'s str. Alexandria commenced his 52nd season of navigation on the St. Lawrence River and Lake Ontario, May 1.

The Lake Erie Navigation Co. has been granted a license in Ontario under the law respecting extra-provincial companies, Alex. Leslie, Walkerville, Ont., being appointed its attorney.

W. H. Hopkins, Parry Sound, Ont., has been appointed harbor master of Depot Harbor, Ont., and H. R. McAllister, wharfinger of the Government wharf at Cockburn Island, Ont.

The tug Rheatta, of Buffalo, N.Y., has been purchased by Capt. G. Kinnie and his brother, J. Kinnie, marine engineer, of Midland, Ont. She will be operated on Georgian Bay.

The Niagara, St. Catharines and Toronto Navigation Co.'s str. Garden City has been given an extensive overhaul at Port Dalhousie, Ont., during the winter, and went on her run May 18.

The Montreal and Cornwall Navigation Co., commencing April 30, put on a service of four trips a week from Cornwall, Ont., to Montreal, Que. This will be double the service given in 1906.

The Turbine Steamship Co. is reported to be considering the purchase or chartering of two additional steamers, one of which will run between Toronto and north shore points to Brighton, Ont.

The new twin screw steamer for the Otonabee Navigation Co. was launched at Harwood, Ont, May 15, and named the Otonabee. When completed she will ply on Rice Lake and connecting waters.

The W. G. Kerr, owned by the Western Transit Co., Tonawanda, N.Y., cleared from Duluth, Minn., April 30, with a cargo of 440,000 bush of grain, the largest ever carried by a single vessel on the Great Lakes.

An order has been placed in Dundee, Scotland, for a new steamer for the Great Lakes trade. The vessel is to be 250 ft. long, 43 ft. beam and 26 ft. moulded depth, and will be ready for delivery in Sept.

The New Ontario Steamship Co. has passed a by-law increasing its capital stock from $100,000 to $500,000, which by-law has been confirmed by supplemental letters patent issued under the Ontario Companies' Act.

The Ontario Dock Co. has deposited with the Department of Public Works, Ottawa, plans of the dock it proposes to erect south of Lake St., Toronto, and is applying for an order-in-council approving of the same.

The tug Beaver of Cornwall, Ont., has been purchased by F. Gilbert, contractor, Montreal, from Capt. Bonar. The Beaver was built at Belleville, 1892, and has been engaged in towing on the Cornwall Canal for several years.

The Spanish River Navigation Co. has purchased the steam barge Arctic from the Rathbun Lumber Co., Deseronto, Ont. Capt. Bernhardt took charge of the vessel on the trip from Deseronto to Spanish River.

The Niagara Power Co. recently purchased the Gem, a small harbor tug, in New York. The Gem left for Buffalo, April 26, via Halifax and the St. Lawrence River and canals. It was expected the tug would be 35 days making the 1,700 miles trip.

The new passenger str. City of Cleveland, under construction at Detroit, Mich., for the Detroit and Cleveland Navigation Co., for the Detroit-Cleveland run, was destroyed by fire May 13. The damage is about $700,000, which is well covered by insurance.

Survey parties have been placed on the route making the final location of the extension of the Trent Valley Canal from Healey's Falls to Trenton, Ont. It is expected that this section of the canal will be placed under contract at an early date.

Tenders were received to May 29, by the Department of Railways and Canals, for the works connnected with the construction of section 2 of the Holland River Division of the Trent Canal. A. T. Kerr, Newmarket, Ont., is Division Engineer in charge of the work.

Capt. Thos. Donnelly, Kingston, Ont., has been seriously ill for some months, and has been ordered to give up all work for some time. His illness was the result of a severe cold contracted while investigating the loss of the str. Golspie in Dec., 1906.

Owing to the collision of the tug Schneck, bound from Sault Ste. Marie, Ont., to Ogdensburg, N.Y., with the Michigan Central Rd. bridge crossing the Welland Canal, near Welland, Ont., May 4, navigation on the canal was suspended until the evening of May 6.

The Northern Navigation Co.'s Lake Superior Division, operating in connection with the G.T.R. from Point Edward, Ont., consists of the steamers Huronic, Saronic, Majestic and Ionic. It is intended to supplement these steamers by extra tonnage in the fall.

Jas. McDonald is having built at Collingwood, Ont., a 75 ft. tug for his fishing business at Blind River, Ont. A second tug, of similar dimensions, is being completed at the same yard for Port Rowan, Ont., owners. This tug will be taken round to Lake Erie on completion.

Rosedale Limited has been incorporated under the Ontario Companies' Act with a capital of $100,000 and offices at Hamilton, Ont., to carry on a general navigation and transportation business. The provisional directors are: R. O. and A. B. MacKay, J. P. Steedman, T. Hobson, L. F. Stephens, of Hamilton, Ont.

The Ontario Court of Appeal has reserved judgment in the action of the Hamilton Steamboat Co. against MacKay. This was an action for an injunction to restrain defendants from using a slip at the foot of James St., Hamilton, in any way that might derogate from a grant made to plaintiffs by MacKay in Nov., 1888.

We are advised that while a vote has been passed by the Dominion Parliament for the provision of a steamer for use to patrol the buoys and other navigation marks on the Great Lakes, the Department does not propose to purchase a steamer. As in former seasons a suitable vessel will be chartered to perform the work.

The Dominion Government str. Bayfield has been given a thorough overhaul at her winter quarters, Owen Sound, Ont., during the winter. She is being fitted out for her summer's work on the hydrographic survey of Lake Superior, upon which she will start early in June. She will be stationed this summer in the vicinity of Rossport.

M. J. Butler, Deputy Minister of Railways and Canals, and L. Coste, C.E., have been directed by the Dominion Government to make a report upon the harbors on the eastern and southern shores of Georgian Bay. The Transportation Commission in its report recommended the development of one or more of these ports by the Dominion.

Upon the application of the Imperial Loan and Trust Co., Toronto, a creditor for $7,886.16 debentures, an order was granted May 15 directing the winding up of the Lake Ontario Navigation Co., which owns the str. Argyle. A motion was subsequently made to rescind the order, and the matter was adjourned to enable the company to pay the money.

The Wolverine Fish Co., which is authorized by the State of Michigan to own and operate steam and other vessels in connection with a fishing and transportation business on the Great Lakes, has been granted a license to do business in Ontario along similar lines. The capital to be employed in the Province is not to exceed $30,000. H. D. Lee, Toronto, is appointed its attorney.

The Hall Co. has purchased the str. Fred. Mercier, of Buffalo, for its fleet of colliers. The Fred. Mercier was built at Buffalo, N.Y., 1882, and has the following dimensions: length, 232 ft.; breadth, 35 ft.; depth, 18 ft.; gross, 1,224 tons. The engines are of the fore and aft compound type, cylinders 26 and 48 in. diameter by 42 in. stroke, steam being supplied by two firebox boilers 8 by 15 ft.

The Niagara Navigation Co. opened the season May 1 with the Chicora, making two round trips on week days between Toronto, Niagara Falls, Queenston and Lewiston. On May 20 the Chicora was withdrawn and the Chippewa and Corona were put on the route, giving four round trips each week day. The full service of six round trips is announced to go into effect June 10, when the Cayuga will be placed on the run.

The Canadian Fish and Transportation Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Sault Ste. Marie, Ont., with power among other things to acquire and operate steam and other vessels for use in its business. The provisional directors are: H. C. Hawkins, J. P. McDonald, J. Glanville, Blind River, Ont.; R. Beutel, W. M. McCormick, Bay City, Mich.; G. H. Whitehouse, Chicago, Ill.

The Wacondah Steamship Co., and the Neepawah Steamship Co., have been incorporated under the Ontario Companies' Act to carry on the business of a navigation and transportation company. The capital in each case is $100,000, the offices are at Hamilton, Ont., and the provisional directors are: W. G. Walton, F. A. Magee, F. H. Whitton, J. Milne, J. P. Steedman, C. E. Doolittle and R. O. MacKay, Hamilton.

Capt. Dunn has been reinstated as commander of the Dominion cruiser Vigilant, on Lake Erie, with full pay from the date of his suspension. He was suspended in order that charges made by J. S. Inkster, a former officer, might be investigated. H. H. Collins of St. Catharines, Ont., opened the inquiry at Windsor, April 25, but no one appeared to support the charges, and after some formal proceedings a report was sent to the Department exonerating the commander.

It is estimated that the grain carrying capacity of the Canadian steamers on the Upper Lakes will be increased during the current season by 1,200,000 bush. This is the capacity of 13 vessels purchased, built or building for Canadian owners, and it is possible that the total will be increased by two others having a capacity of 50,000 bush. each. The carrying capacity of the Canadian steamers engaged in the trade in the season of 1906, was approximately 4,500,000 bush.

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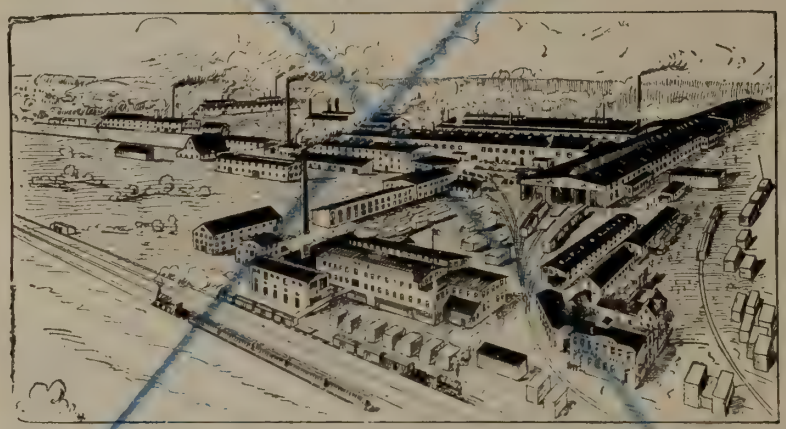

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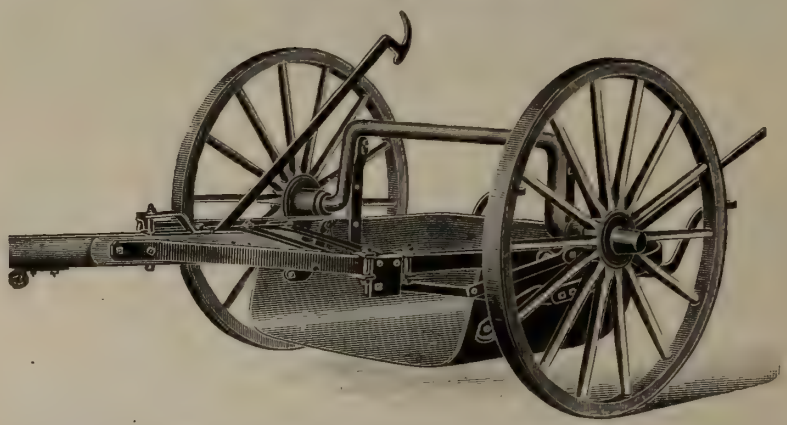

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The Mutual Transit Co., Buffalo, N.Y., will have its vessels on routes during the current season of navigation serving Buffalo, N.Y.; Fairport, Cleveland, Ohio; Gladstone, Hancoughton, Dollar Bay, Hubbell, Mich.; Duluth, Minn.; Superior, Wis.; Windsor, Fort William, Port Arthur, Ont. In addition to its own steamers, Northern King, Northern Queen, North Wind, Northern Wave, Northern Light, North Star, St. Paul, Minneapolis, Rhodes and Huron, the company will operate the steamers Reynolds, Gould and Chili under charter.

The Turbine Steamship Co.'s S.S. Turbinia was announced to run on the following week day schedule, beginning May 20: Leave Hamilton 7 a.m. for Toronto, leave Toronto 9.20 a.m. for Niagara on the Lake and Lewiston, N.Y.; leave Lewiston 11.40 p.m. for Niagara on the Lake and Toronto, leave Toronto 2 p.m. for Niagara on the Lake and Lewiston; leave Lewiston 5.30 p.m. for Niagara on the Lake and Hamilton, leave Toronto 7.50 p.m. for Hamilton. Owing to some accident to her machinery she did not start running on May 20, but it is now said, she will commence the route about June 1. The Turbine Co. has chartered the Lake Ontario and Quebec Navigation Co.'s steamboat Niagara to run between Hamilton, Oakville and Toronto, leaving Hamilton week days at 8 a.m via Oakville for Toronto, and leaving Toronto at 4 p.m. via Oakville for Hamilton.

At a meeting of the board of managers of the Lumber Carriers' Association held at Detroit, Mich., recently, lumber rates for the current season of navigation were fixed. Last season's rate of $2.50 per 1,000 ft. from the head of Lake Superior to Lakes Erie and Michigan was left unaltered. The $2 rates from Keweenaw Point and Georgian Bay to upper Lake Michigan and Lake Erie, and from upper Lake Michigan to Lake Erie were advanced 12½c. per thousand, from $2 to $2.12½. From lower Lake Michigan to Lake Erie, the rate will be $2.25 instead of $2.12½. From Lake Huron to Lake Erie the rate will be $1.87½ instead of $1.75. The rate on cedar posts is raised ¼c. per post, and that on cedar ties ½c. per tie.

The Parry Sound Transportation Co. has been incorporated under the Ontario Companies' Act, with a capital of $150,000 and offices at Toronto, to carry on a general navigation and forwarding business; to own and operate steam and other vessels; to acquire shares in other similar undertakings, and to construct, maintain and operate appliances and undertakings connected with or of benefit to the objects of the company. The provisional directors are: J. B. Miller, F. B. Polson, W. B. Tindall, R. I. Clarkson, and Mrs. J. Miller, Toronto. The company will operate the steamer Seguin between Parry Sound and Port Arthur, Ont., in the package freight trade. Capt. Wilson has been appointed master, and J. Marshall chief engineer.

F. E. Hall & Co., L'Orignal, are having built by the Grangemouth and Greenock Dockyard Co., Greenock, Scotland, a single deck type steamer specially adapted for the lumber trade. The vessel has not yet been named. When she arrives in Canada, which is expected to be during July, she will be put on a route between St. Lawrence Gulf ports and Upper Lake ports. Her dimensions are: length between perpendiculars, 240 ft.; extreme breadth, 41 ft.; moulded depth, 16.3 ft.; depth of hold, 14 ft. She will be fitted with triple expansion engine, cylinders 17,28 and 45 in. diameter by 33 in. stroke, steam being supplied by two Scotch boilers 10 ft. by 12 ft. at a working pressure of 185 lbs. per square inch. A press report states that a second steamer has been ordered at the same yards for Aug. delivery.

The Lake Carriers' Association has put in force the following increased rates of pay for first and second mates: First mates on first-class steamers $125 a month, and second mates $86 a month, an increase of $10 and $6, respectively. On second-class steel vessels first mates will receive $108 a month, and second mates $75 a month, an increase of $8 and $5, respectively. The wages of mates on third-class steel vessels remain the same as last year, $80 for first mates and $60 a month for second mates. On first-class wooden steamers the mates will receive an increase of $8 and $5, respectively, making the wages of first mates $108 a month, and the wages of second mates $75 a month. The wages of first and second mates on second-class wooden steamers remain the same as last year, $90 and $60 a month, respectively.

A deputation including M. J. Haney, Vice-Chairman of the Toronto Harbor Commission, waited on the Board of Control April 30, to urge the appointment of a commission for the purpose of securing a comprehensive plan of harbor improvement for Toronto. A communication was read suggesting that if Toronto was to progress as an industrial and commercial centre a comprehensive scheme would have to be adopted for enlarging and dredging the harbor, widening and deepening the channels so as to permit vessels drawing 20 ft. of water to pass, providing adequate dock and loading facilities, straightening the Don, and making Ashbridge's Bay district available for factory sites. The recommendations contained in the communication read will be sent to the Dominion and Ontario Governments for consideration.

An Ottawa despatch states that the report upon the Montreal-Georgian Bay waterway will not deal with the commercial advantages of the proposed canal, but will report upon the practicability of construction and the cost of the canal. The report will show, the despatch states, that the canal would practically make Fort William and Port Arthur ocean ports, and would shorten the distance by water from the head of the lakes to Montreal by about 400 miles. It is estimated that the cost of carrying grain from the head of the lakes to tidewater would be lessened at least 3½c. a bush. by the construction of the proposed canal. While it is stated the final estimates have not been completed, the present information in the possession of the staff shows that the total expenditure necessary to provide a 21 ft. waterway via French River, Lake Nipissing and the Ottawa River would be $105,000,000. It is stated that the canal will be constructed as a Government work.

The agreement between the G.T.R. and the Cobourg, Ont., Town Council regarding the operation of the car ferry from Charlotte, N.Y., was signed May 10. A few of the provisions of general interest are: The yearly rental to be paid to the town of Cobourg is $2,500, in equal payments of $1,250, on June 30, and Dec. 31. The first payment is to be made Dec., 1907. The lease is between three parties—the town of Cobourg, the G.T.R. in conjunction with the Ferry Co. and Buffalo, Rochester and Pittsburg Railway Co., to operate a ferry for loaded and unloaded cars, passengers and other traffic across Lake Ontario. The lease is for a period of 25 years, with privilege of renewal for three consecutive terms of 25 years each. There is nothing in the lease to interfere with legal claims of citizens along the street where the track now runs, for damages (if any), by construction of additional track. In case of increased traffic the crossings are to have protection as directed by the Railway Commission.

The Huntsville, Lake of Bays and Lake Simcoe Navigation Co. has not issued a report of its operations for 1906, but it was considered satisfactory by the shareholders present at the annual meeting. The passenger earnings for the year were about 50% greater than for 1905, while the total earnings were 40% greater than in 1905. During 1906 the company added three new steamboats, including the Algonquin, to its fleet, and has now under construction a steamer of similar size and capacity to the Algonquin. This steamer will be named the Iroquois, and is expected to be ready for service during June. The Algonquin and the Iroquois will be equipped with searchlights, and it is the intention to run them on special excursions at nights during the tourist season. The Canada Ry. News Co. has secured the contract for the news and refreshment counters on these steamers. The directors were re-elected and W. J. Moore was elected to fill the vacancy caused by the resignation of W. Duperow. Following are the officers and directors for the current year: President, C. O. Shaw; Vice-President, H. F. Chaffee; General Manager, S. H. Jacobs; Assistant General Manager and Secretary, W. J. Moore; Treasurer, J. McKee.

The tug Ajax was the first vessel to navigate the Trent Canal from Lakefield to Peterboro. She went through May 15.

W. Stewart, of Riverside, N.B., has been appointed a commissioner for the pilotage district of Hillsboro and Hopewell, N.B.

R. McCaul, for some years engineer of the Niagara Navigation Co.'s str. Chippewa, and a former resident of Kingston, Ont., died at Toronto, May 13.

The license of the St. Lawrence Terminal Co. to do business in the Province of Quebec, has been revoked by an order-in-council of the province, dated May 15.

The C.P.R. str. Princess Royal, now under construction at Esquimalt, B.C., will be fitted with wireless telegraph apparatus. The company's str. Princess May will also be similarly equipped.

The St. Lawrence Canadian Navigation Co. has passed a by-law increasing the number of its directors from five to seven. The by-law is signed by A. A. Bernard, President, and L. Laconture, Secretary.

The Nova Scotia Legislature at its recent session passed a resolution urging the Dominion Government to grant a tonnage bonus of $6 a ton to encourage the establishment of steel shipbuilding in Canada.

The Department of Canals is completing a dredge at Ottawa for use on the Rideau Canal. It is 97 ft. long over all. The old dredge St. Louis is being transformed into a houseboat for the men working at the dry dock.

The steamship building at Bridgeburg, Ont., for the St. Lawrence and Chicago Steam Navigation Co., is reported to be about 85% completed. The material for the 460 ft. steamer for R. O. and A. B. Mackay, to be built at the same place, is being delivered.

The improvement of Toronto harbor is not likely to be gone on with during the current year, as the report of the Public Works Department engineer, who recently investigated the question of deepening the present western entrance, had not been made May 16.

The Pittsburg and Erie Coal Co. has been incorporated under the Dominion Companies Act, with a capital of $20,000 and offices at Toronto, for the purpose among other things of owning, chartering or otherwise acquiring vessels of all descriptions and employing the same in the conveyance of passengers and goods between ports in Canada or elsewhere; and to construct and operate docks, wharves, warehouses and other works. The provisional directors are: D. W. Saunders, W. P. Torrance, E. C. Cattanach, J. L. Patient, and E. G. Goodwin, of Toronto.

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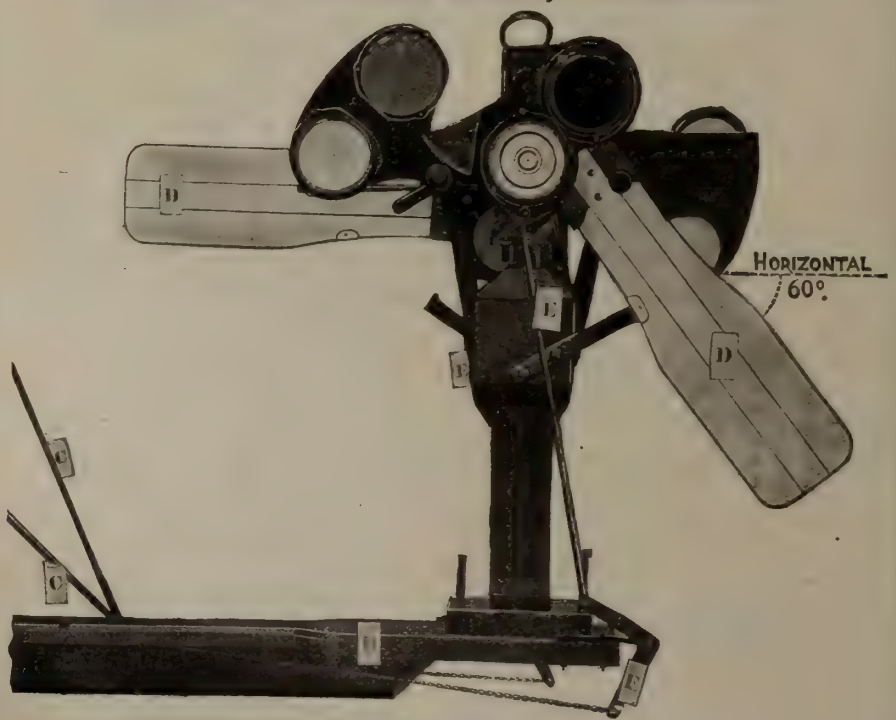

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THE BRADSTREET COMPANY gathers information that reflects the financial condition and the controlling circumstances of every seeker of mercantile credit. Its business may be defined as of the merchants, by the merchants, for the merchants. In procuring, verifying and promulgating information, no effort is spared, and no reasonable expense considered too great, that the results may justify its claim as an authority on all matters affecting commercial affairs and mercantile credit. Its offices and connections have been steadily extended, and it furnishes information concerning mercantile persons throughout the civilized world.

Subscriptions are based on the service furnished, and are available only by reputable wholesale, jobbing and manufacturing concerns, and by responsible and worthy financial, fiduciary and business corporations. Specific terms may be obtained by addressing the Company at any of its offices.

CORRESPONDENCE INVITED

OFFICES IN CANADA:

Halifax, N.S.	Hamilton, Ont.	London, Ont.
Montreal, Que.	Ottawa, Ont.	Quebec, Que.
St. John, N.B.	Toronto, Ont.	Vancouver, B.C.
Calgary, Alta.		Winnipeg, Man.

THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Manitoba, Saskatchewan, Alberta, Etc.

It is proposed to arrange for a ferry service on the Saskatchewan River near Langham, Sask.

The Pioneer Navigation and Land Co.'s str. Alexandria and the str. Smith opened the season of navigation on the Assiniboine and Red rivers at Winnipeg, Man., April 26.

The Department of Marine has purchased the str. Lady of the Lake from the Northern Fish Co., for the fisheries protection service on Lake Winnipeg. The steamer is principally intended to look after the fish hatcheries. The Lady of the Lake was built at Selkirk, Man., 1897; she is a screw steamer, 201 tons gross, 155 tons register, having the following dimensions: length, 105 ft.; breadth, 18.5 ft.; depth, 8.9 ft. She has engines of 13 n.h.p.

The Northern Trading Co., Ltd., has been incorporated under the Manitoba Companies' Act, with a capital of $500,000 and offices at Winnipeg, to carry on the business of carriers of passengers, goods and merchandise upon land and water; to own and operate steam and other vessels, and to conduct a number of other businesses. The provisional directors are: T. S. Ewart, C. W. N. Kennedy, C. Vokes, W. M. Bannantyne, T. A. Irvine, Winnipeg.

The applicants for the act incorporating a company with the title of the International Canal and Power Co., which was refused at the recent session of the Dominion Parliament, were: G. W. Wolvin, H. J. MacKinnon, Port Arthur, Ont.; G. A. Graham, Fort William, Ont.; D. C. Cameron, Winnipeg; W. Johnston, Ottawa; T. Sturgiss, New York. The company proposed to construct canals or waterways to connect Lake Superior with the Saskatchewan River.

The Canadian Vessel Agency, Ltd., has been incorporated under the Manitoba Companies' Act, with a capital of $20,000 and offices at Winnipeg, to act as agents in chartering steam or other vessels; to act as agents of companies carrying on the marine insurance business; to acquire shares in steamship and similar companies, and to own and operate steam and other vessels; and to carry on any business which may legitimately be carried on in connection with the main objects of the company. The provisional directors are: W. R. Allan, E. F. Lang, G. K. Killam, R. McKay, E. S. Parker, Winnipeg.

The Hudson's Bay Co. is having built at Fort Smith, 650 miles north of Edmonton, Alta., a steamer to be named the Mackenzie River, for its Mackenzie river trade. The steamer is of composite build, the steel frames having been made in the U.S., taken by rail to Edmonton, Alta., and with the boiler and engine teamed across to Athabasca Landing. The frames, etc, are being sent on to Fort Smith by boat, and the lumber is being cut at Smith's Portage. The steamer will be put together during the summer and winter, and it is expected she will be ready to start on her initial run to Fort MacPherson in June, 1908. The hull is 135 ft. long, has a breadth of 25 ft. at water line, and is 5 ft. 4 in. deep. It will be divided into five watertight compartments. On a 4 ft. draught the steamer will carry 60 tons of cargo, in addition to 30 tons of fuel. The stern wheel will be 16 ft. diameter by 16 ft. long, and will be driven by engines developing 250 h.p.

Capt. C. E. Kingsmill, heretofore captain of H.M.S. Dominion, has been appointed to H.M.S. Ramilies, and given command of the division for special service vessels at Devonport, Eng. The appointment indicates that the Admiralty does not intend the accident to the Dominion in the Baie de Chaleurs last year to impede Captain Kingsmill's promotion.

B.C. and Pacific Coast Marine.

The C.P.R. has under consideration plans for the construction of a cement jetty on the south shore of Burrard Inlet, B.C.

As soon as the C.P.R. B.C. lake str. Okanagan is put on her run the str. Aberdeen will be put on the ways at Okanagan Landing for a general overhaul.

The B.C. Salvage Co.'s str. Maud has been chartered by the Lighthouse Section of the Department of Marine to aid in the work of establishing beacons and in lighthouse construction on the Pacific coast.

A tug has been built at Emerson, B.C., for the Emerson estate, F. M. Eddy, Manager. Her dimensions are: length, 65 ft.; breadth, 14 ft.; depth, 8 ft. A Scotch marine boiler, and a compound engine are being installed, the latter being constructed at Guelph, Ont.

The former Great Lakes passenger steamer Iroquois recently arrived at Seattle, Wash., after a run of 60 days from New York. She will be fitted with an oil burning apparatus, after which she will be put on the run between Seattle and Victoria, B.C., replacing the Indianapolis.

The Acting Minister of Marine stated in the House of Commons recently that it was intended to make a 25 ft. channel from New Westminster to the sea, but he could not say whether it was proposed to make that city a national port or not. The suggested improvements at Victoria harbor would cost about $1,000,000. Some work was to be done at Victoria during the current year, but he could not say if such work could be considered as part of the plan suggested by the Transportation Commission.

The C.P.R. has had built at Okanagan, B.C., a stern-wheel steamer for the Okanagan Lake service. The new steamer, which has been named the Okanagan, is a duplicate, so far as dimensions and general arrangements are concerned, of the Kuskanook, which was put on the Kootenay Lake service in 1906. The Okanagan has stateroom accommodation for 80 first-class passengers, and can accommodate up to 300 passengers by day. She will run between Okanagan and Penticton, B.C., and is expected to make 18 miles an hour.

Notices to Mariners.

The Department of Marine has issued the following notices:

No. 21. Mar. 25.—British Columbia—59. Vancouver Island, West coast, Clayoquot sound, Fortune channel, Mosquito harbor, Plover point, light established. 60. Vancouver Island, west coast, Clayoquot sound, Mosquito harbor, uncharted rocks. 61. Vancouver Island, west coast, Clayoquot sound, Fortune channel, uncharted rock. 62. Vancouver Island, west coast, Clayoquot sound, Bedwell sound, uncharted rock.

No. 22. April 12.—Ontario—63. Detroit River, Limekiln crossing, changes in channel and in aids to navigation.

No. 23. April 13.—General. 64. Chart compasses, error in variation. British Columbia—65. Vancouver Island, south coast, Juan de Fuca strait, Trial island, change in sounding of fog alarm.

No. 24. April 13.—Quebec—70. River St. Lawrence, chart vicinity of Port St. Frances issued. 71. River St. Lawrence, chart, Becancour to Champlain issued.

No. 25. April 17.—Ontario—72. Lake Erie, Port Colborne, west breakwater, east end, caution.

No. 26. April 17.—New Brunswick—73. Kennebecasis River, Perry point, light improved. Nova Scotia—74. South coast, southern approach to Gut of Canso, Cerberies rock, gas and whistling buoy established.

No. 27. April 19.—General—77. Caution when approaching British naval ports.

No. 28. April 20.—Nova Scotia—West coast, off Brier Island, southwest ledge, gas and whistling buoy to be established. 79. Halifax harbor, McNab Island, government rifle ranges. 80. Cape Breton Island, east coast, St. Ann harbor entrance, buoyage.

The following have been issued by the U.S. Hydrographic Department:

No. 17 April 27.—Lake St. Clair—767. St. Clair flats canal, change in buoyage. Lake Erie—768. Detroit River light, characteristic changed.

No. 18. May 4.—Washington—837. Juan de Fuca strait, Hein Bank buoy replaced by bell buoy. 838. Bellingham Bay, Post point, bell buoy established.

No. 19. May 11.—Lake Erie—867. Detroit River, Limekiln crossing, dredged channel, intended change in lights and buoys. 868. Pelee Island, obstruction to northward.

It is understood that the International Waterways Commission's work is very nearly completed, and that a final report will shortly be issued. All the chief points of difference have been unanimously settled so far as the Commission has power to do so.

"What is a Durham boat?" is a question being asked in the daily papers. These craft are frequently mentioned in the early records of the settlement of Canada in connection with the navigation of the St. Lawrence river. While a description of this type of boat would serve no useful purpose so far as navigation is concerned, the mention of the type brings to mind that there are pointers and sharpies, and other particularly Canadian developed boats in use on some of the rivers and lakes of the Dominion.

By an act passed last session of the Dominion Parliament the Canada Shipping Act, chap. 113 of the Revised Statutes, has been amended by the addition to sec. 566 of the following subsection: "2. Every vessel mentioned in this section or in the two next following sections shall, if it carries passengers, be subject to the provisions of this part applicable to passenger steamboats: Provided that a steamboat used exclusively for pleasure or private use without hire or remuneration of any kind or any object of profit shall not be deemed to carry passengers merely because it carries without hire or remuneration of any kind the guests or persons invited by the owner."

A criticism has been received from Newfoundland in regard to the publications issued by the Canadian Tidal and Current Survey, and complaining of alleged inaccuracies on account of unsystematic methods in the survey of currents. It may, however, be fairly said, on the other hand, that the publications produced give prima facie evidence of the work done having been well directed, and there is good reason to believe that tests of the tide tables for the current year will prove them to be in a creditable state of efficiency. There can be no doubt that the work in regard to currents in the Straits of Belle Isle, as well as off Cape Race, and in the Bay of Fundy, has done something to diminish accidents, while on the Pacific coast, where the tides are intricate and where the information formerly available was conspicuous by its unreliability, the government work lately accomplished has been especially appreciated and has gained a very high degree of respect in mariners' estimation.—Shipping Illustrated.

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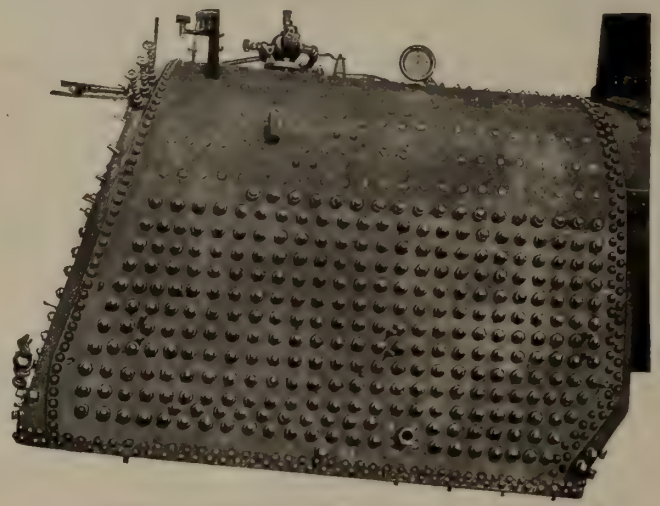
The Soule Dust Guard wearing surface is protected by what is known as SINGAPORE BUFFALO HIDE. Friction polishes, but DOES NOT WEAR THE SURFACE. INVESTIGATE. TRY THEM and we feel confident YOU WILL ALWAYS SPECIFY THEM.

SOULE RAW HIDE LINED DUST GUARD CO.

113 Devonshire Street - - BOSTON, MASS.



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CANADA FOUNDRY COMPANY, Limited
TORONTO, ONT.

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Flannery Bolt Company, = Pittsburgh, Penn., U.S.A.

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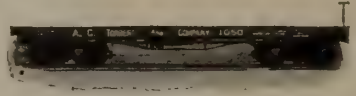
The New Model Vulcan Heavy Duty Steam Shovels are substantially built throughout, with every part of sufficient strength to withstand the heaviest strains. All gears, pinions and racking have cut teeth. Built in sizes from 22 to 110 tons and 5/8 to 5 cubic yards dipper. Ask for catalog.

THE VULCAN IRON WORKS CO., 113 Vulcan Place, TOLEDO, OHIO.

SPECIAL——IMMEDIATE DELIVERY——RIGHT OUT OF OUR WORKS

FLAT AND  GONDOLA CARS

60,000 Capacity—36 ft. 10 ins. long. WITH OR WITHOUT WESTINGHOUSE AIR, ETC. 50,000 Capacity—34 ft. to 34 ft. 6 ins. long.

A. C. TORBERT & COMPANY

Write us for Proposition

General Offices, MONADNOCK BLDG., CHICAGO, ILL. LOCOMOTIVES, CARS, STEAM SHOVELS, ETC

Coast, Lake and River Officers for 1907.

The following appointments, additional to those published in our May issue, have been made by the principal navigation companies engaged in the coasting, lake and river routes for their various steam and sailing vessels, tugs and barges for the current year. In the first column is given the name of the vessel, in the second, that of the captain, and in the third, that of the chief engineer:

BLACK DIAMOND STEAMSHIP LINE, GLACE BAY, N.S.

Bonavista	D. C. Fraser	G. Lawson
Borgestad	A. Nilsen	O. E. Aurus
Cacouna	L. Holmes	J. P. Leahey
Cape Breton	J. Reid	D. McQuarrie
Catalone	T. L. Glover	A. Mearns
Chris. Knudsen	J. Johannasen	O. Willumsen
Coban	A. McPhail	J. Scott
Dominion	H. Dawson	J. G. Johnston
Fimreite	F. Martensen	
Fornebo	J. Hansen	
Fritzeo	E. Quael	
Hektor	C. Eitrem	J. Johnston
Louisburg	H. W. Gould	
Mystic	A. Abbott	R. A. Richards
Ran	P. Hansen	
Symra	O. Hafstad	P. Schjolberg
Tanke	O. Jacobsen	
Tricolor	O. A. Sunby	

BRAS D'OR STEAMBOAT CO., NORTH SYDNEY, N.S.

Marion	J. J. Moffatt	W. R. Coleman
Weymouth	R. E. Burke	J. Macdonald

CANADIAN FISHING CO., VANCOUVER, B.C.

Celestial Empire	A. Freeman	W. McGuire

C.P.R. BRITISH COLUMBIA COAST SERVICE, VICTORIA, B.C.

Amur	L. P. Locke	J. A. Heritage
Beaver	C. A. Gardner	A. Goddyn
Charmer	R. A. Hunter	T. Moffat
City of Nanaimo	J. C. Foote	J. Petticrew
Czar	A. Christensen	C. G. Brownlee
Joan	J. Ritchie	J.M.Greensh'lds
Otter	D. Brown	R. Moffat
Princess Beatrice	P. J. Hickey	J. Wallace
Princess May	J. O. McLeod	J. McGraw
Princess Victoria	T. O. Griffin	A. L. Brownlie
Queen City	T. S. Guns	A. Pendola
R. P. Rithet	R. A. Hunter	D. Stephen
Tees	J. O. Townsend	J. Thaw
Transfer	W. L. Gilchrist	J. Heay

C.P.R. BRITISH COLUMBIA LAKE AND RIVER SERVICE, NELSON, B.C.

Aberdeen	J. B. Weeks	W. Jacobs
Columbia	J. Dougal	W. Anderson
Kokanee	G. Robertson	W. Nahl
Kootenay	L. H. Fraser	T.F.McKechnie
Kuskanook	W. Seaman	J. G. Cameron
Moyie	L. McKinnon	J. Grey
Okanagan	G. L. Estabrooks	R. C. Haws
Proctor	J. Fitzsimmons	G. Harris
Rossland	A. McLennan	J. Fyfe
Slocan	M. P. Reid*	G. Stewart
Valhalla	O. Alfsmo	D. H. Biggam
Ymir	F. Orr	G. Stewart

CAPE BRETON ELECTRIC CO., LTD., SYDNEY, N.S.

Hygeia	A. McLeod	W. G. Scott
Pawnee	J. Brown	A. Campbell
Peerless	J. H. Lewis	A. McNeill

CHARLOTTETOWN STEAM NAVIGATION CO., LTD., CHARLOTTETOWN, P.E.I.

Empress	A. Cameron	J. A. Rowe
Northumberland	A. MacLean	C. Cumming

J. B. FAIRGRIEVE, HAMILTON, ONT.

Arabian	G. A. Brien	W.H.Cunning'm

GRAND MANAN STEAMSHIP CO., GRAND MANAN, N.B.

Aurora	J. A. Ingersoll	— Gray

F. E. HALL & CO., L'ORIGNAL, ONT.

G.H.Warmington (bge)	B. Bowen	
Iona	L. Daigneault	G. Johnson
Ralph T. Holcomb	J. A. Smith	N. Lazure

LEMCKE TUG CO., LTD., LION'S HEAD, ONT.

W. E. Gladstone	F. J. Waugh	Wm. Knox

OTTAWA FORWARDING CO., LTD., OTTAWA, ONT.

Hall	W. J. Hall	E. Bedard
Hebron	P. Eligh	A. Drury
Ottawan	G. Depencier	A. Toutant
Scotsman	A. G. Clark	J. B. Seguin
Welshman	T. Ranger	W. Drury

OTTAWA TRANSPORTATION CO., LTD., OTTAWA, ONT.

A. Stewart	A. Clarke, Sr.	F. St. Germain
Dolphin	B. Rabeau	P. Trottier
Florence	M. Lefebvre	T. Chartier
G. A. Harris	F. Pilon	E. Seguin
Sir Hector	Z. Lavigne	Z. Belanger

PETERBOROUGH NAVIGATION CO., PETERBOROUGH, ONT.

Otonabee	W. H. White	J. Londen
Water Lily	G. D. Frewer	A. Lajeuse

RICHELIEU AND ONTARIO NAVIGATION CO., MONTREAL

Cornwall	L. Valois	C. Gendron
Laprairie	P. McLean	J. Matte
Longueuil	H. Mandeville	H. Noel
Mouche-a-Feu	J. Crepeau	
Murray Bay	J. Simard	N. Beaudoin
Rapids King	A. Dunlop	J. W. Hazlett
Ste. Irenee	A. Fortin	J. Hamelin
Terrebonne	C. Laviolette	E. Beaucage

STAR LINE STEAMSHIP CO., LTD., ST. JOHN, N.B.

Champlain	C. J. Wasson	B.C.Estabrooks
Majestic	C. W. McLean	G. H. Burpee
Victoria	C. C. Taylor	W. I. Barlow

SYLVESTER BROS., TORONTO

St. Louis	G Williamson	

TEMAGAMI NAVIGATION CO., LTD., TORONTO

Bobs	F. Mackay	A. E.Wannam'r

THREE RIVERS STEAMSHIP CO., GEORGETOWN, P.E.I.

Electra	W. McI aren	J. Fraser
Enterprise	W. McLaren	J. Fraser

The Electra is used during the first part of the season, and the Enterprise during the remainder.

UNION STEAMSHIP CO., OF BRITISH COLUMBIA, VANCOUVER, B.C.

Camosun	— Saunders	— Foster
Capilano	— Cockle	— Roe
Cassia	— Moody	— Morton
Comox	— Bartlett	— Draglovitch
Coquitlam	— Leblanc	— Holborn
Coutli	— Howse	— Trebilcock

WASHADEMOAK STEAMSHIP CO., LTD., CODY'S, N.B.

Aberdeen	G. H. Perry	— Johnson

Sault Ste. Marie Canals Traffic

The following commerce passed through the Sault Ste. Marie canals in April:

Articles.			Canadian Canal	U.S. Canal	Total
			Open'd Apr. 22	Open'd Apr. 23	
Copper	Eastbound	Net tons	....	585	585
Grain	"	Bushels	291,500	618,000	909,500
Building stone	"	Net tons	....	....	....
Flour	"	Barrels	....	93,386	93,386
Iron ore	"	Net tons	12,880	191,780	204,660
Iron, pig	"	"	....	....	....
Lumber	"	M. ft. B.M.	....	312	312
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	276,495	2,867,841	3,144,336
General merchandise	"	Net tons	....	37	37
Passengers	"	Number	....	3	3
Coal, hard	Westbound	Net tons	39,333	111,548	150,881
Coal, soft	"	"	172,832	379,605	552,437
Flour	"	Barrels	....	....	....
Grain	"	Bushels	....	....	....
Manufactured iron	"	Net tons	4,419	5,006	9,425
Salt	"	Barrels	....	33,780	33,780
General merchandise	"	Net tons	19,951	10,162	30,113
Passengers	"	Number	6	56	62
Freight—Eastbound		Net tons	26,031	304,659	330,690
" Westbound		"	236,535	511,388	747,923
Total freight		"	262,566	816,047	1,078,613
Vessel passages		Number	146	278	424
Registered tonnage		Net tons	381,111	571,274	952,385

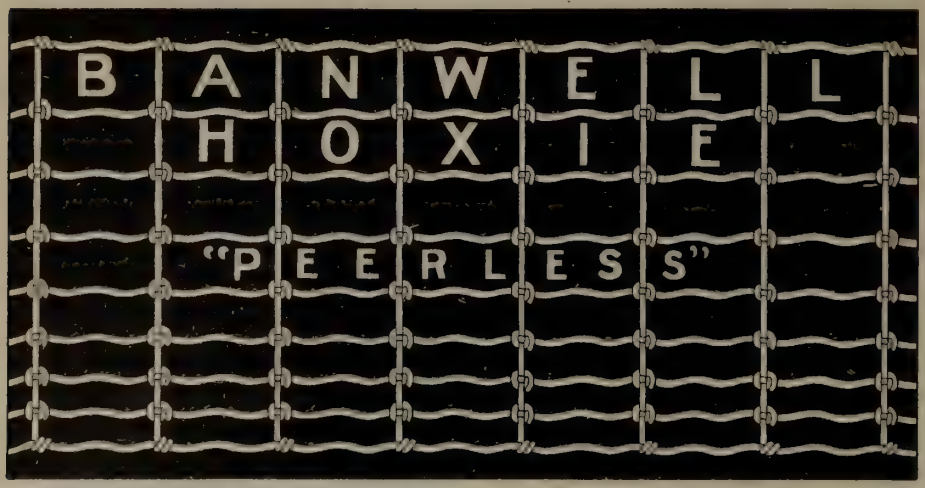
The Allan Line S.S. Corsican.

Following are particulars of the twin screw steamship Corsican, to run between Liverpool and Canada, which was launched on the Clyde, Scotland, April 29:

Length, 516 ft.; breadth, 61 ft. 3 ins.; depth from bottom of keel to top of deck at centre, 42 ft. 9 ins.; gross registered tonnage, about 11,500 tons; machinery: triple expansion twin screw engines of 8,500 i.h.p. Speed at sea about 16 knots. Number of passengers, 1st class, 300; 2nd class, 400; 3rd class, 1,500.

No effort has been spared to obtain construction of the first quality, the vessel not only conforming to highest class in the British Corporation, but possessing considerable additional strengthening in order to suit the owners' special needs. The scantlings of the main structure are all in excess of British Corporation requirements, and the vessel is an exceedingly fine specimen of naval architecture for the service intended. The hull of the vessel generally has been constructed of mild steel, open hearth process. The hull is divided into separate water-tight compartments by seven bulkheads, and to further ensure immunity from danger in the event of collision or stranding, a complete inner bottom is fitted, divided by numerous partitions into separate water ballast tanks, each tank being capable of being filled or emptied independently, so that the trim and draught of the vessel can be adjusted at any time to suit the conditions of service.

Four complete steel decks are fitted, viz., orlop, lower, main and shelter, the last named being completely sheathed with pitch pine, the lower and main decks being covered with the most modern substitute for wood. Above the shelter deck at the fore end is the forecastle deck, providing accommodation for stewards, firemen and crew. At the after end is a long combined poop and bridge sheathed with pitch pine, forming a promenade which is assigned partly to 2nd class passengers and partly to 3rd class. Above this is the promenade deck which is reserved exclusively for 1st class passengers, and above this again is the upper bridge deck on which is placed the officers' quarters, the flying bridge which is used for navigating purposes being formed by an extension of the officers' house roof. The passenger accommodation has been arranged in order that each individual may have a maximum of space and comfort. The now general practice of placing a number of staterooms on the promenade deck has been adhered to in this vessel, these rooms accommodating two occupants. The passages throughout the accommodation are extra wide, having abundance of light and air. Metallic beds having spring mattresses, patent fold-up lavatories, boot-racks, jewel cases, etc., are provided in each room. The ventilation has received special attention, the usual method of tube ventilator being supplemented by a complete installation on the thermo-tank system. The 1st class dining saloon, a large roomy apartment, is situated in the deck house at fore end of bridge deck, extending right across and is lit by extra large square windows on three sides. The decoration is carried out simply and in good taste, the panelling being in oak, with white enamelled ceilings relieved with gold. Passing through the entrance hall, which is on the same level and adjoins dining saloon, a grand staircase leads to music room entrance above and thence to the music room on the promenade deck. Large square windows round three sides provide light similar to dining saloon. The decoration of the music room is carried out in white with mural panels in silk, the ceiling enamelled white and picked out in gold. The 1st class smoking room, placed at the same level as the music room, is large and airily constructed, well lighted and ventilated, and as a further aid to ventilation



PEERLESS WOVEN WIRE FENCING

Made from uniformly heavy hard steel wire, well galvanized.
Made in large rolls ready to stretch up.
Requires but few posts; costs very little to erect.
Conforms perfectly to any surface, no matter how rough.
Reduces the cost of fence maintenance to a minimum.

BANWELL HOXIE WIRE FENCE COMPANY LIMITED
HAMILTON, ONTARIO

C.P.R. LANDS

THE CANADIAN PACIFIC RAILWAY COMPANY have 10,000,000 acres of selected lands for sale in Manitoba, Saskatchewan and Alberta.

Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian (generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
All prices are subject to change without notice.

TERMS OF PAYMENT

An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160	Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106 10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

CANADA NORTH-WEST LAND CO.

This Company has 550,000 acres of selected lands in Manitoba and Assiniboia which offer excellent opportunities to settlers and investors who desire to secure good lands in well-settled districts. These lands are on sale at the Company's Office at Winnipeg, and at the various land agencies of the Canadian Pacific Railway Company.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

THE CANADIAN BRONZE COMPANY

LIMITED

MONTREAL, P.Q.

High Grade Lead Lined Journal Bearings for all classes of Service.
Wearing Metal Castings for Locomotives.
Miscellaneous Brass Castings for Railroads.

WORKS AND OFFICE: 91 DELORIMIER AVE., MONTREAL, P.Q.

Underwood

If you use a typewriter at all doubtless you use a visible writer—the other kind is obsolete. It may be that you have recently purchased some Underwood imitation for which strong claims were made; for instance, that the writing would remain in perfect and permanent alignment.

Everyone recognizes that the prime requisite of a typewriter is good work, and that good work necessitates accurate alignment. But no visible writer can possess this essential unless it has a guide at the printing point. The Underwood has the guide.

If you have a new Underwood-imitation use it for six months. If it holds its alignment without the aid of the repair-man we will present you with the best typewriter made—an Underwood. Make the test; you stand to lose nothing, and—we feel quite safe.

United Typewriter Co., Ltd.
7 Adelaide St. East
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And in all the principal cities

THE NORTHERN NAVIGATION COMPANY

For Parry Sound, Byng Inlet and French River

Leave Collingwood 10.30 p.m. Mondays and Fridays.

For Sault Ste. Marie and Way Ports

Leave Collingwood 1.30 p.m. Owen Sound 11.30 p.m., Tuesday, Thursday and Saturday.

For Sault Ste. Marie, Port Arthur, Fort William and Duluth

Leave Sarnia 3.30 p.m. June 3, 7, 10, 12.

Sailings, 3, 12, through to Duluth.

Sailing 10th for freight business only.

Commencing June 17th, Passenger Steamers will leave Sarnia 3.30 p.m., every Monday, Wednesday, and Friday.

Friday steamer going through to Duluth.

Tickets and Information from all Railway Passenger Agents

a large teak skylight is fitted above the centre of the room. The decoration is in fumed oak with white ceiling, and comfortably placed seats and tables are fitted together, with a bar leading directly off this room. The sanitary arrangements may be described as perfect, being placed in detached blocks, so as to be easily accessible from any part of the accommodation. The 2nd class passengers are provided for in a style differing but little from the 1st class. Their dining saloon, smoking room, entrance hall and music room are quite as comfortable if not so ornate as is the 1st class. On the shelter deck is the dining saloon, which extends right across the ship and is tastefully decorated in white with a mahogany dado, the natural color of the wood making a pleasant contrast to the general color scheme. At the aft end of the engine casing of the bridge is the music room, the walls of which are done in mahogany with lincrusta panelling. In the same house is placed the entrance hall and smoking room, panelled in fumed oak. At different parts of the vessel comfortably fitted up entrance halls, smoking room and ladies' cabins are provided for 3rd class and steerage. A Marconi installation of wireless telegraphy is fitted on board.

The vessel will carry some 11,000 tons deadweight. Cargo loading and discharging facilities are unusually complete, six large cargo hatches being served by 12 powerful winches and derricks to suit, and a powerful warping winch in steering gear house. Large tanks capable of containing about 400 tons of fresh water are built into the ship for passengers' service. The machinery consists of two sets of triple expansion engines, the diameters of the cylinders being 28, 47 and 79 inches, with a stroke of 54 inches. The intermediate and low pressure cylinders are fitted with flat slide valves. Direct steam starting and reversing gear is fitted, also steam and hand gear for turning engines in port. The surface condenser is horizontal, and built of steel plates with cast iron ends; the condensing surface is 6,000 sq. ft. Propellers are three-bladed, having cast iron bosses and blades of manganese bronze. Three are seven boilers with a working pressure of 190 lbs. per sq. inch. Each boiler is fitted with four furnaces. Forced draught is supplied by two fans. There are 28 furnaces; the heating surface is 22,000 sq. ft., and the grate area 539 sq. ft. The machinery is estimated to drive the vessel on trial at a speed of over 17 knots. The builders are Barclay, Curle & Co., Ltd. The Corsican is booked to sail from Liverpool July 11 for Montreal.

Harbor and River Improvements.

The report of the Department of Public Works for the year ended June 30, 1906, shows an expenditure of $2,374,664.84 on harbor and river works, of $1,922,315.08 on dredging, etc., and of $151,995.35 on slides and booms in connection with the movement of lumber in rivers. The sums applied to harbor and river works were about the same as in 1904-05, but the expenditures on dredging have increased from $375,000 in 1903-04 to $1,460,000 in 1904-05, and to nearly $2,000,000 in 1905-06. The revenue of the department included $81,211.21 from slides and booms and $44,067.63 from graving docks. The income from graving docks shows an increase of nearly $20,000, of which $10,000 was received from Esquimalt, B.C.; $3,000 from Levis, Que., and more than $6,000 from Kingston, Ont. The report reviews the principal works in progress during the year.

In Manitoba the most important work devolving upon the department is the improvement of the St. Andrew's rapids of the Red River. That work which was begun some years ago, and which had to be abandoned on account of material changes in the accommodation to be given, was restarted during the year, a contract being entered into, upon altered plans, with Quinlan and Robertson. As a large portion of the work is being constructed of concrete, the department entered into a contract for the supply of the cement necessary, thus ensuring uniformity in the quality as well as in the examination and testing of the material.

A plan for the improvement of Port Arthur and Fort William harbors was adopted and tenders were invited for the dredging necessary to give 22 ft. of water and permit access to the wharves built by the Canadian Northern Ry. and the C.P.R. Arrangements were also made for the dredging of a basin at Mission River in order to accommodate the lake terminus of the National Transcontinental Ry. These dredging operations, representing the expenditure of a large amount of money, have been extended over a period of three years, owing to the difficulty in getting a larger number of dredges to work simultaneously and with proper results in a limited area. The work is being satisfactorily executed, and as it is proceeding it greatly increases the depth available. Dredging has been continued at Midland, Collingwood and other points in Ontario, whilst earnest consideration is being given to the further improvement of Midland, which has become an important terminal harbor, whence railways carry freight transported over the lakes from the west.

The Tarte pier at Montreal is practically completed. The undertaking carried on at Quebec by Dessault and Lemieux has been pushed with vigor, and when completed will afford greater accommodation for large ocean-going steamers than has heretofore been the case. The work consists of an extension of the old breakwater by a length of 1,460 ft., which will provide four berths for the largest steamers plying on the St. Lawrence. In 1904-05 and 1905-06 the expenditure on the Quebec contracts amounted to nearly $600,000. This appears, however, to be only the commencement of a larger work which will ultimately require to be built in Quebec harbor in order to provide the accommodation for the increasing trade. The class of vessels coming up the St. Lawrence is continually getting larger, their draught is rapidly increasing, and the officials of the department express an opinion that before many years have passed the new steamers that will trade to the St. Lawrence will require the greater accommodation, which the works as at present planned will be able to afford when they are completed. "In this connection," the report proceeds, "the Department has for some time had its attention drawn to the necessity of constructing a new graving dock for the St. Lawrence. It is a matter of very immediate moment and one which, if delayed, may have a far-reaching effect on the shipping trade of Canada. If the large vessels which are now used on the Atlantic Ocean be not sure of finding at their terminal points in the St. Lawrence a place where they can speedily and properly be repaired, should any accident occur, the trade accommodated by these large carriers will gradually find its way elsewhere, as the time has passed when small steamships are able successfully to compete with the larger ones, and the latter having won the day, will require repairing accommodation, which cannot be denied them if they are to continue to be engaged in the Canadian trade. The present dock, which was built in 1876, was, when designed, expected to be sufficient for the requirements of the country for many years to come. It is now 30 years old, and its dimensions are of the past. Those who are conversant with the revolution that has taken place in the size and capacity of the present large carriers, claim that the structure has outlived the usefulness mapped out for it when constructed. It can still, with its length of 600 ft., and its width at the entrance of 62 ft., accommodate vessels about 500 ft. long and under, but the depth over the entrance gate is such that deep draught vessels cannot enter it."

The dredging plant under the control of the Department includes the following:

St. Lawrence, self-propelling elevator dredge
Canada, self-propelling elevator dredge.
Prince Edward, spoon dredge.
George McKenzie, spoon or dipper dredge (wood en hull).
Cape Breton, boom and dipper dredge (steel hull).
New Dominion, spoon dredge (wooden hull).
New Brunswick, clam shell dredge (wooden hull).
W. S. Fielding, combined elevator and hydraulic hopper dredge.
King Edward, propelling hydraulic dredge.
Nakusp, self-propelling dipper dredge.
St. Louis, spoon dredge.
Priestman, barge and clamshell dredge
Queen, Nipissing, Ontario, Challenge, International, Mattawa, Dredge No. 2, Dredge No. 6, Winnipeg, Manitoba, Mudlark, dipper dredge.
Sir Richard, Richelieu, St. Maurice, Progress, Dredge No. 1, dredges.
Cricket, Rona, Muskrat II, Speedy, Montgomery, Blanche, Victoria, tugs; and an unnamed steel tug and tender in B.C.
A pile driver with boiler and engine mounted on scow; a stone lifter well large grips; wooden scow Reserve; a steam centre well stone lifter; a catamaran twin stone lifter; schooner Rutherford, two dump scows, and the snag boat Sampson.

Among the Express Companies.

The Dominion Ex. Co. has advanced its Winnipeg office to a general agency, W. M. Gordon being appointed general agent.

R. B. Colwell, route agent of the Dominion Ex. Co., Halifax, N.S., is on leave of absence. His duties are being performed by F. W. Branscombe.

W. A. Hart, Dominion Ex. Company agent, Halifax, N.S., has resigned and has been succeeded by W. R. Spooner from the company's Montreal office.

G. J. Bothwell has been appointed route agent Canadian Northern Ex. Co., with headquarters at Winnipeg, succeeding F. W. Bowles, transferred to Battleford, Sask.

The Dominion Ex. Co. has issued a yellow-covered Chinese almanack for the purpose of advertising its express money order system among the Chinese residents of Canada.

J. H. Sparling, Superintendent Canadian Ex. Co., Toronto, died rather suddenly May 4, aged 51. He had been in the company's service for over 30 years, commencing as a messenger at Orillia, Ont.

International Classification 17 is being used, according to a circular issued by the Canadian Ex. Co., on all business to and from U.S. points. The new scale N. in the classification takes the place of the Canadian Ex. Company's regular produce rates.

The Canadian Express Co. has opened offices at Birdsalls, Crookston, Foxboro, Myrtle, Ravensworth, Ont.; La Tuque Jct., Sacre Cœur, Que.; Canaan, N.B.; and has closed its offices at Brooklyn, Clarksville, Kennetcook, South Maitland and Windsor, N.S

The Maritime Express Co. ceased to operate on the Halifax and Southwestern Ry. June 1, and has been succeeded by the Halifax and Southwestern Ry. Express Department, the work of organizing which has been done by W. C. Muir, Auditor Canadian Northern Express Co.

We are officially advised that the Board of Railway Commissioners having granted the express companies doing business in Canada an extension to July 1, within which to have their tariffs of tolls approved, it is not intended to take up immediately the investigation of the tolls charged. Paragraphs in the daily papers stated that the commission proposed to take up the matter at the end of May.

KERR'S GLOBE AND GATE VALVES

STRICTLY HIGH GRADE. TESTED & PACKED

THE KERR ENGINE CO. LIMITED

VALVE AND HYDRANT MANUFACTURERS

WALKERVILLE, ONT.

ENAMELLED IRON SIGNS

For all Purposes

Write for Prices —to—

ACTON BURROWS LIMITED

29 MELINDA ST. TORONTO

There is nothing which gives such Constant Satisfaction as a

TELEPHONE

In Office or Residence

It is a faithful and ever ready Messenger.

It extends your field of usefulness.

Increases your Comfort.

Doubles your capacity for business.

THE BELL TELEPHONE COMPANY OF CANADA

E. F. DARTNELL, MONTREAL

CONCRETE MIXERS,

STONE CRUSHERS AND SCREENS,

FINE PRESSED BRICK, Canadian and American, all colors.

ENAMELLED BRICK.

ORNAMENTAL TERRA COTTA.

TERRA COTTA FIREPROOFING.

DAMP RESISTING PAINTS,

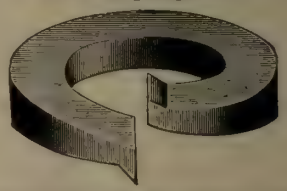
(FOR IRON, WOOD, BRICK AND STONE WALLS, ETC.)

CAR PAINTS,

AND OTHER BUILDERS' AND CONTRACTORS' SUPPLIES.

THE POSITIVE LOCK WASHER

Is the BEST Nut LOCK for all purposes



WE ALSO MAKE PLAIN COILS AND TAIL NUT LOCKS

The Positive Lock Washer Co.

Sole Mfrs., Newark, N.J.

F. H. HOPKINS & CO., Agents, MONTREAL

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WALKERVILLE, ONTARIO

MANUFACTURERS OF

LOCOMOTIVE TURNTABLES ROOFS STEEL BUILDINGS

Railway and Highway BRIDGES

STRUCTURAL IRON WORK OF ALL DESCRIPTIONS

The Canadian Expressmen's Mutual Benefit Association during 1906 received $2,118.99 and expended $1,527.57, the cash balance on hand now being $1,833.41. During the year 82 new members were enrolled. The officers for the current year are: President, E. Allen; Vice-President, B. S. Murray; Secretary-Treasurer, W. T. Murphy; Auditors, R. A. Mitchell, W. Ballingall and J. P. Hetherman.

The Newfoundland Legislature at its recent session passed an act providing that express companies doing business in the colony shall on or before Jan. 31 in each year furnish to the Minister of Finance and Customs statements of their affairs made up to Dec. 31 of the preceding year, showing the number of money orders issued, the number of orders and the amount of money sent out of the colony during the year; the number of orders and the amount of money orders received from each country abroad; the number of packages expressed within the colony; the number of packages sent out of the colony, and the number received from the different countries abroad. For failure to comply with the terms of the act a penalty of $10 a day is provided.

In connection with the reduction of the through immigrant rate which the C.P.R. has put in force between Liverpool, Eng., and Vancouver, B.C., the G.T.R. has applied to the Western Passenger Association for authority to meet the rate. It is argued that by means of the cut rate it will be possible to reach San Francisco, via California, cheaper than by the direct routes.

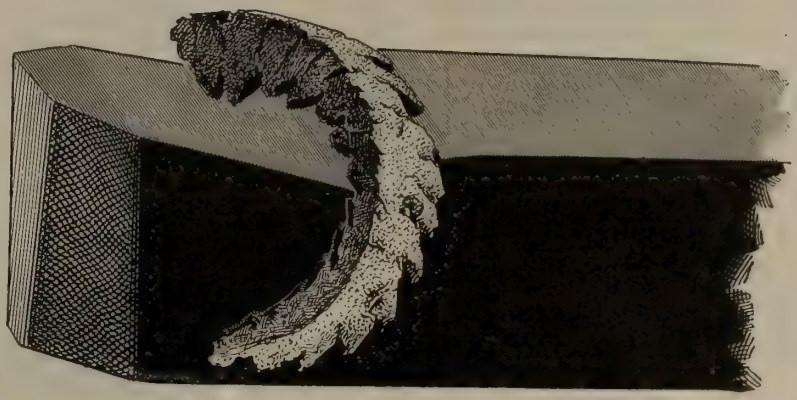
CANADA SOUTHERN RAILWAY CO.

The Annual General Meeting of the Canada Southern Railway Company, for the election of Directors and other general purposes, will be held on Wednesday, the 5th day of June, 1907, at the hour of eleven o'clock in the forenoon, at the Company's head office in the city of St. Thomas.

NICOL KINGSMILL,
Secretary, C.S. Ry. Co.

April 18th, 1907.

The JESSOP High-Speed Self-Hardening TOOL STEEL



Is Unexcelled for Turning Locomotive Tires, Car Wheel, Shafting, Etc.

¼-inch cut, ¼-inch feed.

Speed 20 to 40 feet per minute.

Tools hardened by heating white hot and cooled in air.

CAN NOT BE BURNED.

WM. JESSOP & SONS, Limited, Sheffield, Eng.

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SOLID FORGED ROLLED WHEELS

Locomotive Driving Tires
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The Standard Steel Works
PHILADELPHIA

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DOMINION BRIDGE CO., LTD., MONTREAL, P.Q.

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TURNTABLES, ROOF TRUSSES
STEEL BUILDINGS
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Structural METAL WORK of all kinds

BEAMS, CHANNELS, ANGLES, PLATES, ETC., IN STOCK

FARNLEY IRON

Best Yorkshire Iron for Staybolts, Rivets, etc. Leading sizes in stock ready for immediate shipment.

Railway Material and Supplies

HOMER TAYLOR, = 180 ST. JAMES ST., MONTREAL

NIAGARA GRAND ISLAND BRIDGE CO.

The Annual General Meeting of the Niagara Grand Island Bridge Company, for the election of Directors and other general purposes, will be held on Wednesday, the 5th day of June, 1907, at the hour of eleven o'clock in the forenoon, at the Company's head office, in the city of St. Thomas.

NICOL KINGSMILL,
Secretary, N.G.I.B. Co.

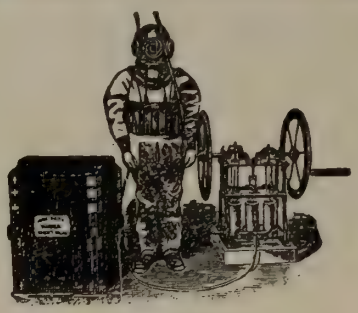
Dated at St. Thomas, 18th April, 1907.

NIAGARA RIVER BRIDGE CO.

The Annual General Meeting of the Niagara River Bridge Company, for the election of Directors and other general purposes, will be held on Wednesday, the 5th day of June, 1907, at the hour of eleven o'clock in the forenoon, at the office of the Canada Southern Railway Company, in the city of St. Thomas.

NICOL KINGSMILL,
Secretary, N.R.B. Co.

Dated at St. Thomas, 18th April, 1907.



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MANUFACTURER OF
DIVING APPARATUS
FOR SALE OR HIRE
BRASS FOUNDER & COPPERSMITH
152 Craig St. West, MONTREAL

PROPELLER WHEELS
SOLID OR SECTIONAL
for
Speed, Towing or General Purposes
made from
Iron, Steel or Bronze

Over One Hundred Wheels Carried in Stock

STEEL CASTINGS

THE WM. KENNEDY & SONS
Limited
OWEN SOUND, ONTARIO

The "DILLON" HINGE-STAY FENCE

MANUFACTURED IN THREE WEIGHTS AND VARYING FROM FOUR WIRES 36" HIGH TO TWELVE WIRES 58" HIGH

All Strands are HIGH CARBON HARD Steel Wire

Owen Sound Wire Fence Co. Limited
Owen Sound, Ontario

Established 1872

THE R. WOODMAN MFG. & SUPPLY CO.

MANUFACTURERS AND DEALERS IN

RAILWAY AND MILL SUPPLIES

Ticket Punches, Speed Indicators, Lead Car Seals, Sealing Presses, Factory Time and Railroad Checks, Car Pushers, Hat and Coat Badges, Uniform Buttons, etc., etc.

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THE LATROBE COUPLER

MADE ONLY IN STEEL

POSITIVE LOCK

POSITIVE LOCK SET

EFFECTIVE KNUCKLE THROWER

LATROBE STEEL AND COUPLER CO.

MAIN OFFICE: 1200 GIRARD B'D'G, PHILADELPHIA
Works: MELROSE PARK, ILL.
BRANCH OFFICE: 1720 OLD COLONY B'D'G, CHICAGO

Sessions-Standard Friction Draft Gear
Simplest and Best

Both Made by Standard Coupler Co.
2 RECTOR STREET NEW YORK

Standard Steel Platforms
Used by all Canadian Railways

Telegraph and Cable Matters.

The G.N.W. Telegraph Co. has opened an office at Canfield Jct., Ont.

H. P. Dwight, President G.N.W. Telegraph Co., has resigned the presidency of the Canadian Birkbeck Investment and Savings Co.

The C.P.R. Telegraph Department has granted a 15% advance of wages, with a reduction of half-an-hour in the working time of night operators, to employes on the western lines.

Representatives of the Marconi Wireless Telegraph Co. were in North Sydney, May 9, it is reported, with the object of arranging for the construction of a wireless telegraph station there.

The Newfoundland Legislature at its recent session voted $13,500 for telegraph and cable extensions, repairs and office upkeep; and $120 for cable protection at Change Islands.

The Anglo-American Telegraph Co.'s cable between Cape Traverse, P.E.I., and Cape Tormentine, N.B., which was broken in Jan., was repaired May 12, by the cable repair str. Minia.

The C.P.R. Telegraph Department has opened offices at Nicola, B.C.; Rossburn Jct., and St. Norbert, Man.; Beaucage, Coniston, (James Bay Jct.), Heaslip, Midhurst, Moulinette, Shakespeare Mine, Ont.

It is stated that over 10,000 messages were transmitted between Prince Edward Island and the Nova Scotian mainland by the Marconi Wireless method at the Government stations during the recent winter.

The cable repair str. Minia has repaired what is claimed to be a deliberate breaking of the Anglo-American Telegraph Co.'s cable between Placentia, Nfld., and North Sydney, N.S. The breakage was about ten miles east and a quarter-mile north of Flat River, Nfld.

The fact that the late Dr. W. H. Drummond was in early life a telegraph operator in the employ of the Montreal Telegraph Co., has not been generally mentioned in the biographical notices. As an operator he was contemporary with the late Mayor Jas. Cochrane, of Montreal, and A. Walsh, local manager C.P.R. Telegraphs, Montreal.

General Telephone Matters.

The Bell Telephone Co. is arranging to give a continuous service—day and night—at Carman, Man.

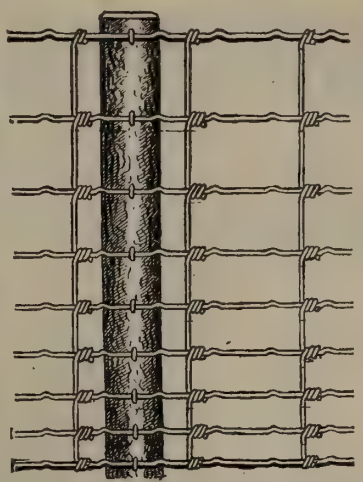
A. G. Bell, the inventor of the telephone, has been granted the honorary degree of Doctor of Science by Oxford University.

The old G.N.W. Telegraph line between Union and Sparta, Ont., has been sold to E. A. Smith, who purposes utilizing it for a farmers' telephone line.

The Rosser, Man., municipal council has decided to take steps to instal a local telephone system in connection with the provincial long distance lines.

The St. Catharines, Ont., City Council is negotiating with the Stark Telephone, Light and Power Co., with respect to a franchise for a telephone system in that city.

The Eastern Telephone Co. is completing the installation of a new system in North Sydney and Sydney Mines, N.S. The company has also moved into a new exchange building.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STEEL RAILROAD FENCE

Maximum Protection at Minimum Cost.

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THIS IS OUR LINE. WRITE TO US ABOUT IT.

AMERICAN RAILWAY SUPPLY CO.
24 PARK PLACE, - NEW YORK

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THE GARTSHORE-THOMSON PIPE & FOUNDRY CO.
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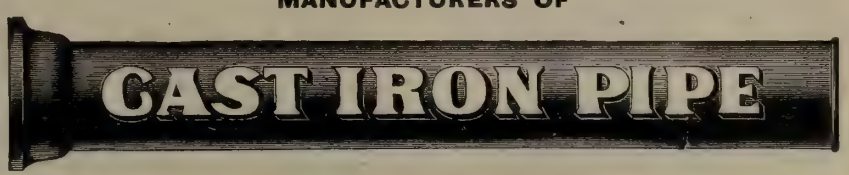
MANUFACTURERS OF



3 inches to 60 inches diameter
FLEXIBLE AND FLANGE PIPE AND SPECIAL CASTINGS
FOR WATER, GAS, CULVERT AND SEWER
HAMILTON, ONT.

TRANSMISSION MACHINERY OF EVERY KIND
QUOTATIONS ON APPLICATION.
MILLER BROS. & TOMS, - MONTREAL, CAN.

The agreement between the Bell Telephone Co. and the London, Ont., City Council for a three years' exclusive franchise, expiring Dec. 31, 1909, at $4,000 a year, has been signed.

Wm. Grant, who died at Woodstock, Ont., April 23, aged 73, it is claimed solved some of the problems of telephone communication 50 years ago, but was unable to profit by his discoveries through lack of funds.

SHERIFFS
MANUFACTURING CO.

Milwaukee, Wis., U.S.A.
ESTABLISHED 1854

JAMES T. GARDNER
RAILWAY EQUIPMENT
615 Railway Exchange
CHICAGO, ILL.

Has on Hand at all times
First-Class Freight and Passenger Locomotives
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Specifications with Prices on application

E. L. DREWRY
REDWOOD BREWERY
WINNIPEG, MANITOBA.

MANUFACTURER OF THE CELEBRATED . . . . .
REFINED ALE, EXTRA STOUT AND REDWOOD LAGER.

ALSO THE.. **GOLDEN KEY BRAND**
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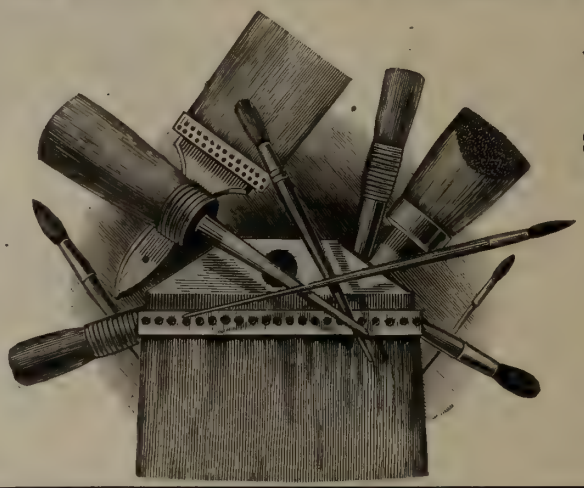
GUILFORD S. WOOD
HIGH GRADE
Mechanical Rubber Goods

Air Brake Hose a Specialty — P. & W. Preservative for Hose
Vestibule Diaphragms — Car Furnishings

Great Northern Building - CHICAGO, ILL.

WOLFE BRUSH COMPANY



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General Offices and Factory:
South 15th and Bingham Streets
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Manufacturers of Superior
Brushes
Especially Designed For
Rail Roads

REAMERS ALL KINDS OF REAMERS FOR RAILROAD SHOPS AND BRIDGE BUILDING

BUTTERFIELD & CO., ROCK ISLAND, QUE.
HAND, MACHINE AND TAPPER TAPS, STAY BOLT TAPS, BOILER AND PATCH BOLT TAPS. QUALITY UNSURPASSED.

Greening's Steel Wire Chain

If you are interested in Chains examine carefully perfect mechanical construction of Greening's. It is the most perfect Chain made. We make it in 13 sizes. Correspondence solicited. We send cuts with table of breaking strain, samples, etc., upon request.

THE B. GREENING WIRE CO., LIMITED
HAMILTON, ONT. MONTREAL, QUE.

The equipment for the automatic telephone system being installed at Edmonton, Alta., has been delivered. The new station is expected to be ready about the end of June, and the entire system equipped early in Sept.

The Bell Telephone Co. has decided to put in an entirely new plant at Chatham, Ont. New premises have been leased for an exchange, and it is proposed to put the wires in underground conduits as far as possible.

The Dominion Parliament has voted $10,000 towards the fund being raised for the purchase of the old Bell homestead at Brantford, Ont., for a public park, as a memorial of A. G. Bell's invention of the telephone.

The Minister of Public Work for Alberta informed a deputation from Vegreville recently that the Government was prepared to take over the local telephone system, and to construct a rural line from that place north to St. Paul's Crossing, Alta.

The telegraph line formerly operated by the G.N.W. Telegraph Co. between Listowel and Haysville, Ont., has been purchased by J. P. Ernst, and is being converted into a telephone line. It will have a connection with the Bell Telephone lines at Listowel.

The Bruce Telephone Co. is being organized for the purpose of constructing telephone lines throughout the county. Franchises have already been secured at Teeswater and in Culross tp., and negotiations are in progress for franchises in Walkerton, Brant and other Ontario municipalities.

The Winnipeg Council City Legislative Committee has sent a delegation to Montreal to attend the investigation into the matter of telephone tolls being held by the Board of Railway Commissioners. The delegation was instructed to put the case for a reduction of tolls as strongly as possible.

The Ontario Railway and Municipal Board is having standard specifications prepared for local and municipal telephones to be constructed under the act of 1906. The idea is to have the systems to be constructed inexpensive, but durable, and uniform so that connection can be made one with the other.

The Barrie, Ont., Town Council has passed a by-law granting a five years' exclusive franchise from April 1, 1906, to the Bell Telephone Co. The company is to pay $300 a year, and gives four free phones. The rates are not to exceed $25 for instruments in business places, and $20 for those in private houses.

The Montreal City Council has adopted a resolution protesting against rates charged by the Bell Telephone Co., and asking the Board of Railway Commissioners to fix rates at not more than $25 a year for private house lines, $35 a year for telephones for professional men, and $50 for telephones in business establishments.

The Glengarry Telephone Co. is being organized in Cornwall, Ont., for the purpose of constructing telephone lines through Glengarry county. The committee in charge of the project is P. Chisholm, Lochiel, Ont.; D. N. McLeod, Kirkhill, Ont.; D. McCaskell, Laggan, Ont. The committee has made arrangements for a connection with the Bell Telephone Co.

The Port Hope Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices in the township of Clarke, Ont., to carry on the business of a telephone company within the county of Northumberland. The provisional directors are: G.W. Jones, G. Payne, S. R. Jones, of Clarke tp.; W. H. Burley, A. P. Pollard, W. H. B. Dickenson, of Hope tp.

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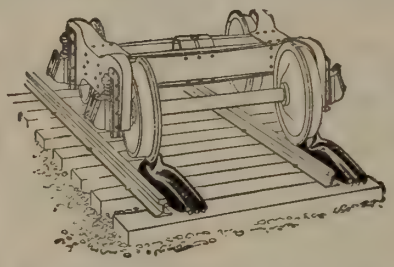

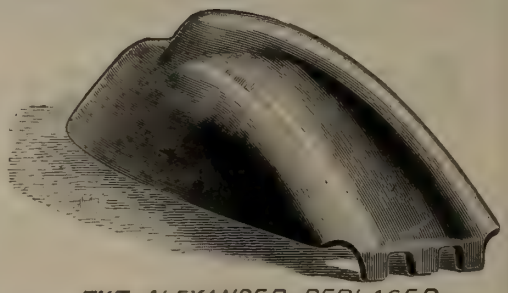

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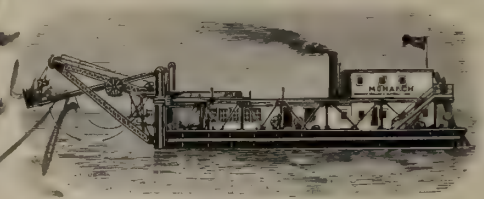

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The Uxbridge and Scott Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Uxbridge, Ont., to carry on a general telephone business in the county of Ontario. The provisional directors are: W. Lapp, W. S. Kennedy, B. A. Widdifield, W. J. Weldon, F. Shier, R. J. Moore, of Scott tp.; and W. S. Ormston, of Uxbridge, Ont.

The Coquitlam and Burnaby Telephone Co. has commenced construction on its line between New Westminster and Vancouver, B.C. It is proposed to construct lines to connect Vancouver, Burnaby, New Westminster, Coquitlam, and the Fraser Valley to Chilliwack. G. W. Hines and W. R. Austin, of New Westminster, are the principal promoters of the new line. The first named claims to have completed arrangements for a connection with the B.C. Telephone Co.'s lines at Vancouver.

The Board of Railway Commissioners opened an investigation into the question of telephone tolls at the office of the Bell Telephone Co., Montreal, April 29, and after some preliminary matters had been arranged the sitting was adjourned to May 13. G. F. Shepley, K.C., and W. S. Buell are acting as counsel for the crown in conducting the investigation, while J. Richardson is the accountant. W. D. Lighthall is acting on behalf of the Union of Canadian Municipalities, and N. Lafleur, K.C., represents the Bell Telephone Co.

The Okanagan Telephone Co. was incorporated by an act passed at the recent session of the British Columbia Legislature, with a capital of $500,000 and offices at Vernon, B.C., with power to construct telephone lines throughout the county of Yale, and all cities, towns and municipalities within the county. It has power to acquire other telephone lines, and to amalgamate with other similar companies. The company also has power to change its name, and in this connection it may be mentioned that the company originally applied for incorporation as the Coldstream Telephone Co. The provisional directors are: E. Bloomfield, R. C. Spinks and G. C Van Horne.

L. B. McFarlane, General Manager Bell Telephone Co., recently stated that the growth of the telephone business throughout Canada during 1906 had been phenomenal, and the company had been compelled to spend large sums in order to meet the demands. During the current year it was proposed to expend $2,500,000 upon extensions and improvements. About $800,000 would be expended in Montreal upon a rearrangement of the entire system, so that the company will be in a position to double the present number of subscribers. It has also been decided to establish a new exchange in the north end of Montreal at St. Joseph boulevard, and a new uptown exchange on Mountain avenue. A new exchange will also be constructed at Westmount, Que., and the conduit system in Montreal is to be largely extended.

The act providing for the granting of pensions to employes of the Intercolonial Ry. and the Prince Edward Island Ry., has been passed by the Dominion Parliament. The pension department is being organized, and it is said that several hundred employes will be put on the retired list in the course of a few months.

The C.P.R. has paid, under protest, the fees charged by the city of St. John, N.B, under the labor license by-law, in connection with the bringing in of its employes for the winter season of navigation. The fee is $7.50 for each man brought in. The C.P.R. argues that it is permanently settled in the city, and is paying sufficient taxes, so that it should be exempt from such further taxes as the labor license by-law. The matter will be taken to the Supreme Court.

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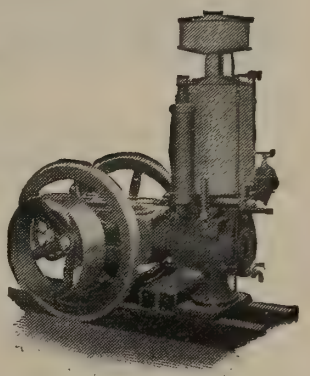

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The N. L. Piper Railway Supply Co.....Toronto.

Crowbars
B. J. Coghlin & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Culverts
Forest City Paving &ConstructionCo.,London,Ont
Steel Concrete Co. (Ltd.).....Montreal.

Culvert Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Cuts
Acton Burrows Limited.....Toronto.

Derailing Devices
Hayes Track Appliance Co.....Geneva, N.Y.

Derrick Ropes
Dominion Wire Rope Co.....Montreal.
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N. J. Holden Co.....Montreal.

Diaphragms for Vestibules
G. S. Wood.....Chicago, Ill.

Dies
Butterfield & Co.....Rock Island, Que.

Diving Outfits
John Date.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Doors (Ex-Platform Trap)
O. M. Edwards.....Syracuse, N.Y.

Door Signs
Acton Burrows Limited.....Toronto.

Draft Gear
McCord & Co.....Chicago, Ill.
Standard Coupler Co.....New York City.

Drawing Materials
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Dredges
M. Beatty & Sons.....Welland, Ont.
Vulcan Iron Works Co.....Toledo, Ohio.

Drills
W. Abbott.....Montreal

Drills, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Drills, Electric
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Rock
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Twist
Baldwin Steel Co.....New York.

Dry Goods
The Hudson's Bay Co.....

Dump Cars (Contractors')
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Dust Guards
Soule Raw Hide Lined Dust Guard Co., Boston.

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American Brake Shoe & F'dry Co..Mahwah, N.J.

Economizers
Babcock & Wilcox (Ltd.).....Montreal.

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Acton Burrows Limited.....Toronto.

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Canada Foundry Co.....Toronto.
E. F. Dartnell.....Montreal.
Dominion Bridge Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Electric Ry. Brake Shoes
American Brake Shoe & F'dry Co..Mahwah, N J.

Electrical Fuses
Standard Explosives Limited.....Montreal.

Enameled Iron Signs
Acton Burrows Limited.....Toronto.

Engineers, Consulting
W. H. Breithaupt.....Berlin, Ont.

Engineers' Supplies
Canadian Fairbanks Co.....Montreal.

Engines, Automatic
Robb Engineering Co.....Amherst N.S.

Engines, Corliss
E. Leonard & Sons.....London, Ont.
Robb Engineering Co.....Amherst, N S

Engines, Gasoline
Canadian Fairbanks Co.....Montreal.
Goold, Shapley & Muir Co.....Brantford, Ont
Ontario Wind Engine and Pump Co.....Toronto.

Engines, Hoisting
M. Beatty & Sons.....Welland, Ont.

Engines, Stationary and Marine
Canada Foundry Co.....Toronto.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst N S.

Excavators
Vulcan Iron Works.....Toledo, Ohio.

Explosives
Standard Explosives Limited.....Montreal.

Express Office Signs
Acton Burrows Limited.....Toronto.

Feedwater Heaters
Canadian Fairbanks Co.....Montreal.
Robb Engineering Co.....Amherst, N.S.

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Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.

Fence Posts, Preservative
Carbolite Carbolineum Co.....Toronto.

Fire Brick
W. H. C. Mussen & Co.....Montreal.
F. B. Stevens.....Detroit, Mich.

Fire Clay
F. B. Stevens.....Detroit, Mich.

Fire Escapes
Locked Wire Fence Co.....London, Ont.

Flags
The Hudson's Bay Co.....

Flour
The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

Flue Rolling Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Forgings
Canada Car Co., Limited.....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
Hamilton Steel & Iron Co., Ltd...Hamilton, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
Locked Wire Fence Co.....London, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.

Gauges, Locomotive Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Glue Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Grain Elevators
John S. Metcalfe Co.....Chicago, Ill.

Groceries
The Hudson's Bay Company.....

Hammers
James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....
Rice Lewis & Son.....Toronto.

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg, Ont.

Hoisting Machinery
Brown Hoisting Machinery Co....Cleveland, Ohio.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill
Independent Pneumatic Tool Co.....Chicago, Ill

Hollow Staybolt Iron and Steel Bars
Falls Hallow Staybolt Co..Cuyahoga Falls, Ohio.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

Hose, Air Brake and Steam
G. S. Wood.....Chicago, Ill.

Hose, Suction
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspection Cars
Canada Cycle and Motor Co..Toronto Junc., Ont.

Inspections
R. W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron and Steel Bars
Hamilton Steel & Iron Co., Ltd...Hamilton, Ont.

Iron, Bar
Homer Taylor.....Montreal.

Iron, Pig
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
McCord & Co.....Chicago, Ill.

Kalsomine Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Lager Beer, &c.
E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal.
Homer Taylor.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H Kelson Co.....Montreal.
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.
Flannery Bolt Co.....Pittsburg, Pa.

Lubricators
McCord & Co.....Chicago, Ill.
Homer Taylor.....Montreal.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery, Power
Jno. McDougall,Caledonian Iron Works Co.Montreal

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.

Motor Cars
Canada Cycle & Motor Co., Toronto Junc., Ont

Motors
McCord & Co.....Chicago, Ill.

Moto s (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co.....Newark N.J.

Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Railings
Locked Wire Fence Co.....London, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tank
S. F. Bowser & Co. Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
Independent Pneumatic Tool Co.....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter, Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)..Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Limited.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada.....Montreal.
N. J. Holden Co.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Machines
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.

Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.

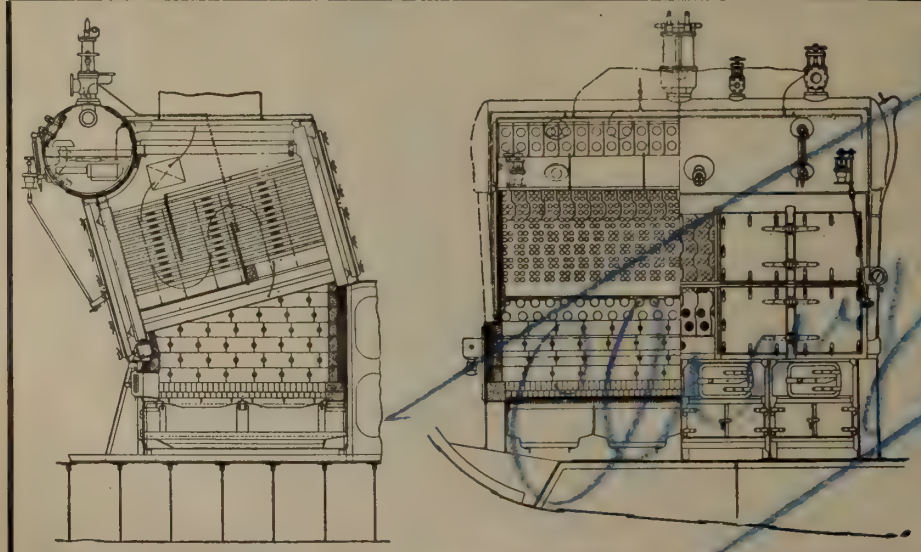
Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal.



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Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co....Boston, Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville, Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel Shafting
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co. Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Valves, Angle
Golden-Anderson Valve SpecialtyCo. Pittsburg,Pa.

Valves, Automatic Float
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Valves, Cushioned, non-return
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Reducing
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Columns
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Window Guards
Locked Wire Fence Co.....London, Ont.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Wrecking Cranes
W. H. C. Mussen & Co.....Toronto

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

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TORONTO, CANADA, JULY, 1907

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See Alphabetical Index to Advertisements on page 507.

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Old Series, No. 195.
New Series, No. 113.

TORONTO, CANADA, JULY, 1907.

For Subscription Rates, See page 507.

Orders by the Railway Commissioners.

2951 and 2952. May 18.—Authorizing Toronto Electric Light Co. to erect electric light wires over C.P.R., G.T.R. and Canadian Northern Ontario Ry. tracks, Queen St. East, Toronto.

2953. May 18.—Authorizing Napierville Jct. Ry. to operate its trains over G.T.R. tracks near Lacolle Jct., Que.

2954. May 18.—Authorizing C.P.R. to construct a branch and two spurs therefrom to Clarke and Clarke's premises, North Toronto.

2955. May 17.—Authorizing C.P.R. to construct a siding to McCann Milling Co.'s premises, Toronto.

2956. May 17.—Authorizing Ingersoll Telephone Co. to carry telephone wires over C. P. R. tracks, Mutual St., Ingersoll, Ont.

2957. May 17.—Approving location of Central Ontario Ry. mileage 0 to 19.3, Herschel tp., Hastings County, Ont.

2958 and 2959. May 17.—Authorizing Bell Telephone Co. crossings over C.P.R. and G.T.R. at Beaconsfield, Que.

2960. May 18.—Authorizing Town of Sarnia, Ont., to lay a sewer pipe under G.T.R. tracks at Christina St., Sarnia.

2961. April 30.—Authorizing Canadian Northern Ontario Ry. to cross C.P.R. tracks with construction trains in Cleland tp., Ont.

2962. May 18.—Authorizing C.P.R. to construct branch line to Cameron & Maudsley's premises, Gainsboro, Sask.

2963. May 18.—Approving location of G.T. Pacific Ry. between Portage La Prairie and High Bluff, Man.

2964. May 18.—Authorizing Northern Extension Ry. to cross C.P.R. and Canadian Northern Ry. tracks with aërial wires in St. John's Parish, Winnipeg.

2965. May 18.—Approving amended location of G.T. Pacific Ry. mileage 8 to 14, Saskatchewan.

2966. May 18.—Authorizing Montreal Water and Power Co. to lay water main across G.T.R. tracks at Greene Ave., Montreal.

2967 and 2968. May 7.—Authorizing G.T. Pacific Telegraph Co. to cross Canadian Northern Ry. at or near Saskatoon, Sask., and between Carberry and Neepawa, Man.

2969. May 18.—Approving location of C.P.R. Moose Jaw branch, from mileage 295.8 to 351.8, Alberta.

2970. May 20.—Authorizing C.P.R. to construct a branch line to B.C. Cattle Co.'s premises near Eburne, B.C.

2971. May 18.—Approving revised location of C.P.R. Lacombe branch to eastern boundary of sec. 26, tp. 36, r. 12, w. of 4th mer. from sec. 5, tp. 39, r. 19, w. of 4th mer.

2972. May 18.—Authorizing C.P.R. to construct a branch line from the Vancouver and Lulu Island Ry. across the foreshore of False Creek for about 331 ft.

2973. May 17.—Authorizing C.P.R. to construct branch line to Canada Traders Co.'s premises, Winnipeg.

2974. May 18.—Authorizing C.P.R. to construct branch line from its Bienfait, Saskatchewan, spur, for about 250 ft. northwesterly.

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S. P. HOWARD,

General Freight Agent Eastern and Lake Superior Divisions, Canadian Pacific Railway, and President Canadian Freight Association.

2975. May 18.—Authorizing C.P.R. to construct branch line to A. D. Gall Chemical & Petroleum Co.'s premises, near Mount Tremblant, Que., 5,657 ft.

2976 to 2990. May 2.—Approving plans of proposed permanent work on various bridges C.P.R. Quebec Section.

2991 and 2992. May 18.—Authorizing C.P.R. to reconstruct its bridges at Riviere des Mille Isles, Que., and Back River, Que.

2993. May 18.—Authorizing C.P.R. to construct a bridge at Six Mile Lake Creek, Ont.

2994 to 2997. May 2.—Approving proposed permanent work on various C.P.R. bridges, Quebec Section.

2998 to 3033. May 7.—Authorizing Bell Telephone Co. crossings over various railways.

3034. May 18.—Authorizing C. P. R to construct branch to Dominion Bridge Co.'s premises, Winnipeg.

3035. May 20.—Authorizing Village of Delormier, Que., to construct sewers and water pipes on Iberville St. under C.P.R. tracks.

3036 to 3039. May 20.—Authorizing Vancouver, Victoria and Eastern Ry. to carry its tracks over Old Yale Road, Ferry Road, Halls Prairie Road, and Clover Valley Road, New Westminster District, B.C

3040 to 3042. May 20.—Approving revised location of G.T. Pacific Ry. in Alberta, mileage 29.948 to 52.998, mileage 20.00 to 29.948, mileage 84.168 to 85.938.

3043. May 20.—Authorizing C.P.R. to construct branch line to J. L. Turner's premises, Beausejour, Man.

3044. May 18.—Authorizing G.T. Pacific Ry. to temporarily use crossing at grade with C.P.R. Miniota branch, Man.

3045. May 20.—Authorizing Innerkip Rural Telephone Association to cross G.T.R. tracks at nine points.

3046. May 22.—Extending time until Aug. 15 for installation of interlocking plant in tp. of Yarmouth, Ont., with crossing of C.P.R.

3047. May 22.—Authorizing C.P.R. to cross 21 streets and all lanes between Spadina Crescent and Avenue H. Saskatoon, Sask.

3048. May 21.—Authorizing City of Winnipeg to cross C.P.R. Stonewall branch with electric transmission lines to city pump station 5.

3049. May 2.—Defining protection to be given in regard to operation, etc., of Headingly Bridge, Assiniboine River, Man. (Application of the C.P.R.)

3050. May 21.—Approving Canadian Northern Ry. standard freight tariff C.R.C. 200.

3051 to 3056. May 20.—Authorizing Bell Telephone Co. crossings over various railways.

3057. May 23.—Appointing G. A. Mountain, Chief Engineer, and A. G. Blair, Law Clerk, to go to Ingersoll, Ont., and take evidence in connection with C.P.R. application to construct spur to Ingersoll Packing Co.'s premises.

3058. May 23.—Authorizing construction of branch line of Vancouver, Westminster & Yukon Ry. from its main line on south shore of False Creek, to Burrard Inlet, Vancouver, B.C.

3059. May 25.—Approving St. Maurice Valley Ry. local standard passenger tariff

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CHARLES MILLER,

PRESIDENT.

C.R.C. 1 between Three Rivers and Shawinigan Falls, Que.

3060 to 3078 and 3081 and 3082. April 2.—Authorizing the Vancouver, Westminster & Yukon Ry. Co. to cross with its tracks over various streets in Vancouver, B.C.

3079 and 3080. April 23.—Authorizing Vancouver, Westminster & Yukon Ry. Co. to cross the British Columbia Electric Railway tracks at Venables St. and Harris St., Vancouver, B.C.

3083. May 20.—Ordering Lake Erie & Detroit River Ry. Co. to install interlocking plant at crossing with G.T.R. in Chatham, Ont.

3084. May 21.—Correcting error in order approving location of G.T. Pacific Ry. from mileage 42 to 77.

3085. May 21.—Approving location of Montreal Park & Island Ry. from Vertu Road to Ste. Genevieve.

3086. May 28.—Authorizing Canadian Northern Quebec Ry. to connect its tracks with the C.P.R. tracks near Lachevrotiere, Que., at mileage 47.4 west from Quebec Bridge.

3087. May 28.—Authorizing Canadian Northern Quebec Ry. Co. to temporarily use for construction purposes only the crossing of the C.P.R. near Lachevrotiere, Que.

3088. May 7.—Authorizing the British Columbia Electric Ry. Co. to cross the Vancouver, Westminster & Yukon Ry. with transmission line at Burrard Inlet, Vancouver, B.C.

3089. May 27.—Amending conditions in order 714, Oct. 24, 1905, respecting crossing over the C.P.R. near Fourth St., Calgary, Alta.

3090. May 23.—Extending time for the filing and approval of express companies' tariffs of tolls until Aug. 1, 1907.

3091 and 3092. May 29.—Amending conditions of order of May 10, 1906, with respect to crossings of Ontario Power Co. over the G.T.R. in Stamford tp., Ont.

3093. May 27.—Authorizing the Trading Store of the Doukhobour Society to cross with its wires the C.N.R. tracks at Vereigen, Sask.

3094. May 27.—Authorizing the Canadian Northern Ry. to cross the Brandon, Saskatchewan and Hudson Bay Ry. tracks near Brandon, Man.

3095. May 22.—Authorizing the G.T.R. to acquire certain lands of John Fraser, Tay tp., Simcoe County, Ont.

3096. May 27.—Authorizing C.P.R. to reconstruct its bridge 102.5, Quebec section.

3097. May 30.—Authorizing Ontario Power Co. to carry transmission wires across G.T.R. tracks east of St. Catharines, Ont.

3097a. May 31.—Approving book of reference in connection with G.T.R. grade revision between St. Lambert and Ste. Rosalie, Que

3098. May 27.—Authorizing C.P.R. to construct a spur to opposite the Brandon Brewing Co.'s premises, Brandon, Man.

3099. May 24.—Authorizing Vancouver, Westminster and Yukon Ry. to cross the B.C. Electric Ry. track on Powell St., Vancouver, B.C.

3100. May 31.—Authorizing issue of subpœnas requiring the General Managers of the Northern Electric Mfg. Co. and the Wire and Cable Co., and such other officers and clerks as may be requested, to appear before the Board to give evidence upon application of the Bell Telephone Co. for the approval of its tariffs of tolls, and to produce such books, papers, etc., as counsel may desire to have produced.

3101. May 30.—Authorizing C.P.R. to grant reduced rate of $60 each from points in British Columbia to Montreal and return to members of the Bisley Team in British Columbia who go to England to compete in the National Rifle Association matches at Bisley.

3102. June 1.—Authorizing Niagara, St. Catharines & Toronto Ry. to open for carriage of traffic, its railway between Thorold and Fonthill, Ont., 6.8 miles.

3103. May 31.—Authorizing Bell Telephone Co. to erect wires across the Michigan Central Rd., 1¼ miles south of Victoria Park station, Niagara Falls Centre, Ont.

3104. June 1.—Authorizing Grand Trunk Pacific Ry. to construct a bridge over the Kaministikwia River at West Fort William, Ont.

3105. June 1.—Authorizing C.P.R. to reconstruct bridge 106.8, Quebec section.

3106. June 1.—Approving of location of Canadian Northern Ontario Ry. through County of Lennox, Ont., mileage 109.5 to 116, west from Ottawa.

3107. June 1.—Approving location of Canadian Northern Ontario Ry. through County of Addington, Ont., mileage 96 to 109.5, west from Ottawa.

3108. May 23.—Extending time fixed in order of Nov. 13, 1906, to Aug. 1, 1907, for express companies to file their tariffs of tolls, subject to the proviso that no increase is made in the rates or tolls now in force.

3109. May 21.—Authorizing Brampton Electric Light Co. to erect wires across G.T.R. right-of-way and tracks at Brampton, Ont.

3110. June 1.—Authorizing Canadian Northern Ontario Ry. to construct a bridge over the Pickerel River, 66.65 miles north of Parry Sound, Ont.

3111. May 19.—Permitting the City Gas Co. of London, Ont., to lay a gas main or pipe under the G.T.R. tracks where the same cross William St., at two different points.

3112. June 3.—Authorizing the Consolidated Elevator Co. to place wires under the C.P.R. right of way at the foot of Fort St., Fort William, Ont.

3113. April 24.—Authorizing the Vancouver, Westminster and Yukon Ry. to cross C.P.R. tracks at Burrard Inlet, Vancouver, B.C.

3114. May 1.—Approving of interlocking plant installed at crossing of Canadian Northern Ry. and C.P.R. at Findlay, Man.

3115. June 4.—Granting, temporarily, the crossing of the Canadian Northern Ry. by the C.P.R., near Brandon, Man.

3116. June 1.—Approving of interlocking plant installed at crossing of Canadian Northern Ry. and C.P.R. in the parish of St. James, Man.

3117. June 1.—Approval of interlocking plant installed at Carberry, Man., where the Canadian Northern Ry. crosses the C.P.R.

3118. May 23.—Extending time till Aug. 1, 1907, for opening for traffic that portion of the C.P.R. on the south bank of the Lachine Canal to its yard at Church St., Cote St. Paul, Que.

3119-3126. June 3.—Authorizing Ontario Power Co. to carry its transmission wires over the G.T.R. at 8 points in Stamford, Thorold and Grantham townships, Ont.

3127. June 4.—Authorizing Ontario Power Co. to carry its transmission wires over the G.T.R. east of St. Catharines, Ont

3128. June 7.—Extending time for approval of Bell Telephone Co.'s tariffs of tolls until Aug. 13.

3129. May 22.—Dispensing with day and night watchmen at G.T.R. crossings at Kent and Lindsay streets, Lindsay, Ont.

3130. May 23.—Directing Toronto Suburban Railway to instal a diamond crossing at St. Clair Ave. between Keele St. and Weston Road, Toronto Jct., Ont., at its crossing with the C.P.R.

3131. June 6.—Authorizing Bell Telephone Co. to carry wires over G.T.R. siding at Coleman Ave., Toronto, to Toronto Type Foundry Co.'s premises.

3132. June 6.—Approving Canadian Northern Ry. location in Manitoba, mileage 23.79 to 69.05, through townships 18, 19 and 20, range 5, w.p.m. and Oak Point Settlement.

3133, 3134. June 6.—Bell Telephone Co. crossings over C.P.R. and G.T.R.

3135. June 6.—Approving C.P.R. location from Nomininge, Que., ten miles northwesterly.

3136. June 6.—Approving revised location Canadian Northern Quebec Ry. in Portneuf and Quebec counties, mileage 13.8 to 37.5 west from Quebec bridge.

3137. June 6.—Approving deviation of Central Ontario Ry. from near mileage 8 to near mileage 12, Monteagle tp., Ont.

3138. May 22.—Authorizing C.P.R. to cross Town Line Road, Orangeville, Ont.

3139. June 6.—Approving Vancouver, Victoria and Eastern Ry. revised location from near Abbotsford to Matsqui, B.C., mileage 50 to 58.

3140. June 6.—Authorizing C. D. Winn, Port Colborne, Ont., to lay a gas main under G.T.R. tracks in Port Colborne.

3141. June 6.—Authorizing C.P.R. to construct spur of 254 ft. to certain premises of City of Calgary, Alta.

3142. June 6.—Authorizing Hamilton Powder Company to carry power and light wires across Esquimalt and Nanaimo Ry tracks at Northfield, B.C.

3143. June 6.—Authorizing C.P.R. to construct spur to J. Saunders' premises, Esterhazy, Sask.

3144, 3145, and 3146. June 10.—Bell Telephone Co. crossings over various railways.

3147. June 10.—Authorizing C.P.R. to construct a public highway over its tracks between Calumet, Que., and the Rouge River.

3148. May 22.—Authorizing J. D. Seeley, President St. John Ice Co., St. John, N.B., to institute legal proceedings against New Brunswick Southern Ry. for permitting W. E. Scully to obtain lower rates of transportation than authorized or in force and for transporting such goods at less than regular tolls in violation of the Railway Act.

3149. June 11.—Approving Brantford and Hamilton Electric Ry. location from east limit of Brantford, Ont., to the east side of Murray St., Brantford.

3150. June 11.—Authorizing Brantford and Hamilton Electric Ry. to cross Toronto Hamilton and Buffalo Ry. by means of an overcrossing, and the G.T.R. by means of an undercrossing, at Cainsville, Ont.

3151. June 6.—Authorizing Malahide and Bayham Telephone Association to cross G.T.R. at Forge Road east of Tillsonburg Jct., Ont.

3152, 3153, 3154. June 10.—Authorizing City of Woodstock, Ont., to lay pipes under G.T.R. tracks at Finkle, Wellington and Canterbury Streets, in that city.

3155. June 10.—Approving location of C.P.R. Toulon extension of Stonewall Branch, Man.

3156. June 10.—Approving Georgian Bay and Seaboard Ry (C.P.R.) location from mileage 0 to 3, Tay tp., Ont.

3157. June 10.—Approving Montreal Park and Island Ry. location from Stoney Point to Valois Point, Que.

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3158. June 10.—Approving Canadian Northern Ontario location, mileage 5.36 to 10, west from Ottawa.

3159. June 10. — Approving Canadian Northern Ontario Ry. location, mileage 227 to 243, west from Ottawa, Ont.

3160. June 10.—Authorizing C.P.R. to construct spurs to Winnipeg Supply Co.'s premises.

3161. June 4.—Authorizing Niagara, St. Catharines and Toronto Ry. to re-issue its present standard freight tariff with such additional mileages as are required to cover extensions being made to Welland and Niagara-on-the-Lake, Ont.

3162. June 10.—Approving location of five stations and eight sidings of Brandon, Saskatchewan and Hudson's Bay Ry., Manitoba.

3164. May 23.—Dismissing application of G.T.R. re apportionment of cost of installing gates at Simcoe St., Cedar Dale, Ont., and directing G.T.R. to pay the village of Cedar Dale $25 costs of application.

3165. June 11.—Amending order 3087, May 28, by requiring that Canadian Northern Ry. locomotives and trains shall not proceed over the crossing of C.P.R. at Lachevrotiere, Que., until signalled by watchman in charge.

3166. June 12.—Authorizing C.P.R. to open second track from Eagle to Vermillion, Ont.

3167. June 14.—Authorizing C.P.R. to use crossing with Qu'Appelle, Long Lake and Saskatchewan Ry. at Saskatoon, Sask., until Sept. 30.

3168, 3169, and 3170. June 14.—Approving plans of interlocking plant of Pere Marquette Rd. with Windsor, Essex and Lake Shore Rapid Ry: at one mile east of Kingsville, at Landsowne Road and at Pelton, Ont.

3171, 3172. June 14.—Authorizing C.P.R. to run its trains over crossing with Canadian Northern Ry. at Carberry and Findlay, Man., without coming to a stop.

3173. June 14.—Approving Brandon, Saskatchewan and Hudson's Bay Ry. interlocking plant with Canadian Northern Ry. in Turtle Mountain municipality, Man.

Quebec Transportation Club.

At the annual meeting June 4, the following were elected: Hon. President, J. G. Scott, General Manager Q. & L. St. J. Ry.; 1st Hon. Vice-President, E. A. Evans, Manager Q.R.L. & P. Co.; 2nd Hon. Vice-President, E. Reynolds, Assistant Superintendent C.P.R.; President, A. Hardy, General Freight and Passenger Agent Q. & L. St. J. Ry.; 1st Vice-President, James Bain, Superintendent Q. & L. St. J. Ry.; 2nd Vice-President, F. S. Stocking, Agent Quebec Central Ry.; Secretary-Treasurer, A. H. Davis, C.P.R.; Committee, J. Hone, jr., C.P.R.; C. E. Tenny, G.T.R.; G. B. Ramsay, Dominion Steamship Line; H. N. Bartlett, Q.R.L. & P. Co., and J. S. Thom, Quebec Transportation and Forwarding Co. The club includes in its membership practically all of the leading transportation officials in the city of Quebec, and is in a flourishing condition. The members will probably have an outing in the fall.

The Cobalt Wonder Mining Co., a Maine, U.S., company, has been granted a license to do business in Ontario under the law governing extra-provincial companies. It is authorized to employ a capital of $1,000,000 and E. Day, Toronto, is named as its attorney. Among the various powers possessed by the company is that of the construction of railways in connection with its mining and smelting operations.

Recent Provincial Legislation

In addition to the acts mentioned in previous issues as having been passed by several of the Provincial Legislatures at their recent sessions, affecting transportation and allied interests, the following have been passed:

BRITISH COLUMBIA.

Bentick Arm and Quesnel Ry.—Act of incorporation.

British Columbia Railway Act.—Amending the provisions of the act.

East Kootenay Logging Ry.—Act of incorporation.

Howe Sound, Pemberton Valley and Northern Ry.—Act of incorporation.

Okanagan Telephone Co.—Act of incorporation.

Portland Canal Ry.—Act of incorporation.

Rainy Hollow Ry.—Act of incorporation.

NEW BRUNSWICK.

Canadian Terminal Ry.—Act of incorporation.

Gloucester Navigation Co.—Act of incorporation.

Imperial Coal Co.—Amending act of incorporation.

Imperial Dry Dock Co. of St. John.—Amending the act relating to the company and amending the act 63 Vict., chap. 30, for granting aid for the construction and equipment of a graving dock at St. John.

International Ry. Co. of N.B.—Amending the acts relating to the company.

New Brunswick Ry.—Amending the acts passed to facilitate the settlement of the company's lands.

New Brunswick Telephone Co.—Amending the act incorporating the company.

Railways.—Amending the act granting aid to certain railways.

St. John Ry.—Amending the act of incorporation.

Telephone companies.—Respecting telephone companies doing business in the province.

Tobique and Campbellton Ry.—Amending the act of incorporation.

NOVA SCOTIA.

Annapolis Valley Ry.—Act of incorporation.

Bear River and Caledonia River Ry.—Act of incorporation.

Bridgewater.—Enabling the town of Bridgewater to grant concessions to a car manufacturing company.

Cape Breton Coal, Iron and Ry. Co.—Amending chap. 110 of the statutes of 1895 and acts amending the same.

Eastern Extension Ry.—Amending statutes of 1905, chap. 3, respecting the claims of municipalities for refund of Eastern Extension Ry. land damages.

Halifax and South-Western Ry.—(1) Relating to the mortgages on the company's undertakings; (2) amending statutes of 1902, chap. 2, confirming the company's charter; (3) respecting certain claims for damages in connection with the railway.

Liverpool and Milton Ry.—Act in relation to company's powers.

Liverpool and Milton Tramway Co.—Amending statutes of 1896, chap. 88, incorporating the company, and the act of 1900 amending the same.

Lockport.—Authorizing the town of Lockport to borrow money to purchase a steamboat.

Margaree Coal and Ry. Co.—(1) Authorizing and confirming an agreement between the Government and the company; (2) Amending statutes of 1903-04, chap. 143, incorporating the company.

Nova Scotia Telephone Co.—Amending the company's act of incorporation, and acts amending the same.

Rhodes, Curry & Co., Ltd.—Amending the act of 1891 incorporating the company.

ONTARIO.

Berlin.—Authorizing the town corporation to acquire the Berlin and Waterloo Street Ry.

Burlington Beach.—Respecting the control of the Beach, certain areas of which are desired for the construction of an electric railway.

Fort William.—Incorporating the town as a city, and confirming by-laws having reference to telephone lines and electric railways, etc.

Grand Trunk Pacific Ry.—Respecting the lands formerly granted in aid of construction of the Lake Superior branch.

Hamilton, Grimsby and Beamsville Electric Ry.—Extending the company's powers as to the construction of certain lines.

Huntsville and Lake of Bays Ry.—Respecting the company's powers.

Nepigon Ry.—Extending time for construction.

Niagara Peninsula Ry.—Act of incorporation.

Ontario Interurban Ry.—Act of incorporation.

Ontario Railway and Municipal Board Act.—Amending the act of 1906.

Ottawa River Ry.—Amending the company's powers and extending time for construction.

Owen Sound, Shallow Lake and Wiarton Ry.—Act of incorporation.

Pembroke Southern Ry. — Authorizing amalgamation with the Canada Atlantic Ry.

Petrolea Rapid Ry.—Amending act of incorporation.

Port Arthur.—Incorporating the town as a city and confirming by-laws as to electric railways, etc.

Silver Bell Electric Ry.—Act of incorporation.

Stratford and St. Joseph Radial Ry.—Act of incorporation.

Temiskaming and Northern Ontario Ry.—Amending and consolidating the laws relating to the railway.

Thessalon and Northern Ry.—Act of incorporation.

Thurlow Ry.—Act of incorporation.

Windsor and Tecumseh Electric Ry.—Respecting the company and its amalgamation with the Sandwich, Windsor and Amherstburg Ry. Co.

The Bay of Quinte Ry. Co. has cancelled all special rates, that is special market day rates in force to Kingston and Napanee, as the management feels that in justice to the other towns on the line it could not continue to grant special fares for Kingston and Napanee and not give them to the other towns also. As the company sells 500 mile tickets at $10, or 2c. a mile, there is no occasion for a continuance of the low market day rates, the mileage tickets being on the lowest basis of any railway in Canada. The first-class fares on this line have always been on the basis of 3c. a mile, so that the recent order of the Railway Commissioners has not caused any material changes in the revision of the company's tariff.

The Canada Railway News Co. has passed a by-law increasing the number of its directors from five to six.

The Lake Superior Iron and Steel Co. has been incorporated under the Ontario Companies' Act, with a capital of $1,000,000 and offices at Sault Ste. Marie, Ont., to manufacture and deal in iron and its products; and to carry on the business of an engineer and contractor for the manufacture of iron and steel railway and highway bridges, cars and locomotives, steamships and other water craft. The provisional directors are: C. W. Thompson, H. B. Johnson, T. Gibson, E. W. Wright, E. P. Score, and H. T. Hunter, Toronto.

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Superheated Steam on Locomotives.

At the recent meeting of the American Society of Mechanical Engineers, H. H. Vaughan, Assistant to the Vice-President C.P.R., presented a paper in which he gave a resume of the results that have been obtained on that road with locomotive superheaters. According to the author, the first application of superheated steam in North America was made by Roger Atkinson, then Mechanical Superintendent of the C.P.R., who applied a Schmidt smoke-box superheater to a 4-6-0 simple freight engine in 1901. In 1903 E. A. Williams, then mechanical superintendent of the same road, applied a Schmidt smoke-tube superheater to two 4-6-0 compound freight engines, and the results obtained from these installations were exceedingly satisfactory, the first engine showing a saving of 25% over corresponding simple engines and 18% over corresponding compound engines of the same class, while the latter engines showed a saving of from 15 to 20% over similar compound engines using saturated steam.

In 1904 the New York Central and Hudson River applied a Cole-Field smoke-tube superheater to a 4-4-2 passenger engine, and in the latter part of the same year the C.P.R. purchased 41 engines, 21 of which were equipped with this type of superheater, and 20 with the Schmidt smoke-tube superheater. Since that date all engines, other than those in switching service, constructed on the C.P.R., have been equipped with smoke-tube superheaters of various types, and on Dec. 31, 1906, there were in service on this road 197 engines equipped with superheaters of the following types:

Schmidt smokebox	1
Schmidt smoke-tube	32
Cole-Field tube	21
Cole return bend	55
Vaughan-Horsey return bend	88

This road has on order 175 locomotives for delivery during the present year, all of which are to be equipped with the Vaughan-Horsey type of superheater, which will make a total of 372 engines to which this principle has been applied.

On the railroads in the U.S. the progress has been far less rapid, and a reasonably complete list of the engines equipped at the end of 1906 is as follows:

Railways	Cole	Schmidt	Vaughan-Horsey	Total
N.Y.C. & H.R.	1	..	..	1
Chic., Burl. & Quincy	1	2	..	3
Rock Island	6	..	..	6
M., St. Paul & S.S.M.	1	..	..	1
Chic. & North-Western	1	..	..	1
Boston & Maine	1	..	..	1
Lake Shore & Mich. South.	1	..	1	2
Totals	12	2	1	15

The results obtained in coal economy have on the whole been exceedingly satisfactory. The results obtained from the first three engines on the C.P.R. have already been referred to. Subsequent results on a large number of superheaters have not, however, shown as large a percentage of saving as would naturally be expected when a device of this nature is applied in sufficient quantities to ensure the engines with which it is equipped being treated in exactly the same way as other engines to which no particular attention is given, and taking their chance with reference to the ability of the engine crews which handle them. Unfortunately, it is difficult to compare superheater simples with ordinary simples on the C.P.R., as previous to the introduction of the superheater most of the recent power purchased was of the compound type, and care has also to be exercised in making comparisons on account of the large variation in the coal consumed per ton-mile on the C.P.R. in the summer and winter. The most satisfactory comparison is arrived at by taking engines working over similar sections during the summer months, and the following table shows the performance of 2-8-0 superheater simples as compared with similar 2-8-0 compound and a 4-6-0 compound of about equal weight and also similar in design. The superheaters are of two types. M-4a being a Schmidt smoke-tube return bend and M-4b a Cole-Field tube, M-3a are 2-8-0 compounds and D-9 a 4-6-0 compound. These results are those obtained during the summer of 1905.

The D-9 engines may also be advantageously compared against three classes of 4-6-0 simple superheater engines of the D-10a class equipped with Schmidt smoke-tube return bend, the D-10b with a Cole return bend and D-10c with a Vaughan-Horsey return bend. These engines were run against each other during the months of Sept., Oct., Nov., Dec. and Jan., inclusive, on the Canadian Pacific between Fort William and Winnipeg, and the general result is given in table 2, with reference to which it should be noted that this section of the line is an exceedingly favorable one for compound locomotives.

	Section: Fort William to Ignace	Ignace to Kenora	Kenora to Winnipeg	Total
1300, D—9, Compound:				
Coal used	13,144	2,520	8,416	24,080
Relative consumption	100	100	100	100
700, D—10a Schmidt-Sup.:				
Coal used	207	6,073	2,170	8,450
Relative consumption	101.0	98.3	100.8	100.7
710, D—10b, Cole Sup.:				
Coal used	2,993	14,082	10,443	28,418
Relative consumption	88.5	105	100.5	99.5
740, D—10c, V.-H. Sup.:				
Coal used	5,842	....	....	5,842
Relative consumption	84.7	....	....	85.5

Previous to the introduction of the superheater, the D-9 engines had been by far the most economical yet used on that section. The superior economy of the D-10c engines is not easy to explain, and although the writer has discussed this question at some length before the New York Railway Club, he does not feel that there is sufficient data on the subject to regard it as a definite fact.

In the early part of 1906, the Cole superheaters were removed from the M-4 engines, and therefore during 1906 were used as simple engines, thus offering a good basis for comparison with the M-4a engines. This year some other classes of engines have been introduced. Two 4-6-0 simple passenger engines class E-5 have been converted to Vaughan-Horsey superheaters, class E-5d and some 2-8-0 simple engines class M-4e have been equipped with the same device, as well as some Pacific type 4-6-2, passenger engines class G-1-2. For purposes of comparison the results obtained from 2-8-0 class compound engines, M-1-2 of slightly smaller size than the M-4 are also shown. These engines are an economical and satisfactory type and offer a good basis for comparison.

In the majority of cases the superheater engines showed a decided saving, and the results between the 4-6-0 and 2-8-0 vary somewhat in accordance with the relative economy of these two general types of engines. Under some conditions the 2-8-0 are more economical, while under other conditions there is very little difference.

A very interesting result is that obtained from Field to Revelstoke. These are engines working on very heavy grades, and are fairly comparable for two classes of locomotives involved, as they were, both working together, and it will be noticed that a saving of 11% for the six months in favor of the superheaters was obtained. For the larger portion of this section the engines were working at long cut-offs where the gain from superheat would be expected to be less marked.

An interesting difference is shown between Swift Current and Medicine Hat. In freight service the D-9 freight compound engines show up exceedingly well in comparison with superheaters, but in passenger service on the same section the superheaters are much more efficient, the compound taking about 60% more coal, due to the loss in efficiency in the compound in passenger service and the relative gain in the superheater.

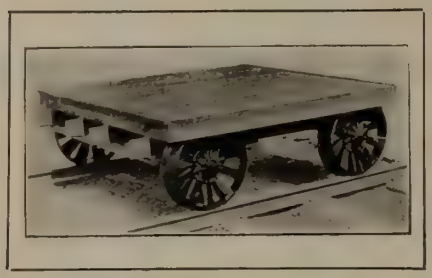
Tests on other roads so far as information has been received show in general a reasonable amount of saving. On the Chicago, Burlington & Quincy the road records show but little difference, and on this road the experience was not satisfactory, due very probably to trouble experienced with leakage at the joints in the headers. On the Boston & Maine comparative tests of two 4-6-0 engines equipped with Cole return bend superheaters in passenger service showed a gain of 14.7 ton-miles per pound of coal on the engine equipped with superheated steam. On the Chicago & North-Western tests comparing identical 4-4-2 passenger engines with and without Cole superheaters showed an economy of 9% in coal in favor of the superheater. On the Lake Shore & Michigan Southern tests of engines equipped with Cole and Vaughan-Horsey superheaters compared to similar engines using saturated steam showed a saving of 18.8% for the Cole and 22.1% for the Vaughan-Horsey superheater in coal per ton-mile.

From the general results of these figures it would appear safe to state that from 10 to 15% saving is obtained in freight service and 15 to 20% in passenger service on engines equipped with superheaters as compared with those using saturated steam, although this economy will be to a considerable extent lost if leakage occurs at the headers.

Results obtained from superheaters on the C.P.R. are such as to justify a continued construction of engines equipped with this device. The past three years have developed many troubles, but they have also indicated their remedy.

The automatic damper, first looked on as a desirable attachment, has proved to be a most important factor in the successful operation of the superheater engine. During the first year's experience it appeared to make but little difference whether this damper was operative or not, but it has been found that if neglected there is a gradual but serious deterioration in the ends of the superheater pipes. The structure of the metal becomes entirely destroyed and leaks occur at the return bends, and the metal in the pipes changes its structure until it can be broken in the hands. The damper is not difficult to maintain, simply requiring proper attention, but the design which has been used, and which was introduced with the original Schmidt superheater is not satisfactory, and can certainly be very much improved, and its maintenance made easier.

The writer sees no reason whatever for abandoning a valuable and important principle such as the use of superheated steam because troubles have been incurred through neglect in maintaining a small attachment which could easily have been attended to had its importance been appreciated, and after three years' experience feels justified in stating that if the dampers are properly maintained, the trouble through the destruction of the ends of the superheater pipes will not occur.



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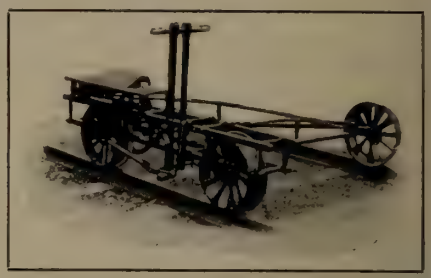

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With properly maintained dampers the next source of trouble is leakage at the connections of the superheater pipes to the headers. In the Schmidt design properly put up, this occurs but very seldom, and the majority of engines with this arrangement will run from shopping to shopping without attention. The objection that has developed in the Schmidt arrangement is that should any leakage occur, especially in the flanges attached to the upper rows of superheater pipes, it is practically necessary to take down all the flanges and make the joints afresh, and this takes considerable time with a corresponding loss in the service of the engine.

The greatest trouble has come from having to do this on account of the leaks occurring at the return bends caused by dampers not being properly maintained, but apart from this trouble the writer considers the Schmidt to be a satisfactory design, although the inability to take out any defective element without disturbing others is to his mind a great objection.

The Cole type of superheater has given considerable trouble from leakage at the joints between the sub-headers and the main header. While this may be overcome by a modification in the design, the number of defects which have developed has been most serious. The joints are probably loosened by the action of the weight of the superheater pipes working backward and forward when the engine is in service, and the loosening of the joints causes a leakage of steam across the face of the copper gasket and rapidly cuts it away. Arrangements are now being made to support the lower ends of headers so as to prevent their movement, and it is thought that this will largely overcome the difficulty. No trouble is experienced in the joints between the superheater pipes and sub-headers, but the latter are difficult to take out one at a time without disturbing those adjacent, and thus in case of a defective superheater pipe it is generally necessary to make all the joints over again, which means considerable work.

The Vaughan-Horsey type gave considerable trouble at first on account of the fittings and union nuts being made of brass, which deteriorated in the heat of the gases, but since these parts have been made of steel, the trouble has been practically overcome, and on account of this design permitting any pair of superheater pipes to be withdrawn without disturbing another, a defective element can be taken out, the joints blinded, and the element replaced at the first convenient opportunity, which is of considerable advantage in roundhouse maintenance where engines are worked as hard and as continuously as they are in American practice.

In general the maintenance of superheaters has not proved expensive, but the troubles enumerated have led to annoying and inconvenient delays to power, which if not treated on their merits, might be held to condemn the device, but when analyzed, there seems to be no insuperable difficulty in remedying these, and with the proper remedy the writer firmly believes there is nothing about a superheater which should lead to its giving a less efficient service than a simple engine, and the slight additional expense is amply warranted by the saving obtained.

The smoke-tubes have given but little trouble, in fact less trouble than the ordinary 2 in. or 2¼ in. tubes which they replaced. On some bad water districts where the small tubes have to be reset every 20,000 or 30,000 miles, the smoke-tubes can be allowed to run through at least one resetting of the small tubes, which is probably due to the considerably better circulation and their greater thickness. Some difficulty has been experienced from the smoke-tubes stopping up with cinders, especially with the Field-tube type of superheater, which seems particularly bad in this respect. With the return bend type, however, on the majority of the roads there is no serious difficulty in this respect, although it is necessary to see that the tubes are properly and systematically blown out and kept clean. The expense in the labor involved in doing this is, however, negligible.

The maintenance of valve and piston rod packing is slightly greater on engines running with superheated steam than on simple engines, but with proper lubrication the difference is not serious. It is necessary to use hard, close-grained cast-iron for the valve and piston rings, but with suitable types of piston and valve stem packing there is practically no difference in the maintenance of simple and superheater engines.

In general, the writer believes that while it may be necessary to insist on the proper maintenance of superheaters the expense involved is not great, and with proper maintenance and the improvement in detailed design which experience is leading to, there will be practically no decrease in the mileage to be obtained from the superheater as compared to the simple engine, and that the additional cost of maintenance will be unimportant.

When engines equipped with superheated steam were introduced, it was considered necessary to use forced lubrication to the valves and cylinders, and this belief led to considerable trouble owing largely to the various forced feed lubricators employed which did not work satisfactorily with their rapid wear and the small amount of attention they received from the enginemen. During the past year, however, it has been found that the ordinary hydrostatic sight feed lubricator is quite as satisfactory on engines using superheated steam as on those using saturated, but it is necessary with the oil at present employed to lubricate the cylinders in addition to simply lubricating the valves, as in common simple engines. The present practice is to use separate feeds to each end of valve and to centre of cylinder near the top, and with this arrangement no difficulty is experienced with lubrication, although the writer believes it would be advantageous to use a rather heavier valve oil than is at present customary.

The writer's experience with locomotives using superheated steam has not been free from vexations and annoying troubles, but it has on the whole been exceedingly satisfactory.

The troubles encountered are being overcome as experience develops their cause, and the saving obtained is apparent in the reduction of the amount of coal used per ton-mile on various divisions of the road as superheater locomotives are introduced. The additional capacity of the engines and the reduction of the work required by the fireman, enabling trains to be handled better, and the development of an engine which in extremely cold weather can be as easily maintained as a simple engine with an economy equal or superior to that of a compound is an important advantage to any railroad working in northern latitudes.

So far as can be seen at present there is no valid reason for discontinuing the application of superheaters, and the writer expects that a considerable increase in the number in use will take place in the next few years.—Railroad Gazette.

The Newfoundland Legislature, at its recent session passed an act fixing the compensation to be paid in respect of the loss or injury to animals or freight upon the railways in the colony; and a further act respecting the hours of labor of railway servants.

July Birthdays.

Many happy returns of the day to—

J. H. Black, Superintendent Temiskaming and Northern Ontario Ry., North Bay, Ont., born near Smith's Falls, Ont., July 8, 1874.

D. E. Blair, Assistant Superintendent Montreal St. Ry., Montreal, born at St. Thomas, Montmagny, Que., July 25, 1877.

D. A. C. Coleman, Superintendent C.P.R., Nelson, B.C., born at Carleton Place, Ont., July 9, 1879.

Geo. Collins, Director, and Manager Central Ontario Ry., Trenton, Ont., born at Kingston, Ont., July 20, 1860.

D. D'E. Cooper, Canadian Freight Agent Lehigh Valley Rd., Toronto, born at Buffalo, N.Y., July 8, 1862.

John Corbett, General Foreign Freight Agent C.P.R., Montreal, born in Lanarkshire, Scotland, July 19, 1863.

E. J. Coyle, Assistant General Passenger Agent C.P.R., Vancouver, B.C., born at Stayner, Ont., July 23, 1870.

S. E. Dewey, chief clerk G.T.R., General Agent's Office, New York City, born at Beckenham, Kent, Eng., July 4, 1879.

J. F. Dolan, City Passenger and Ticket Agent Richelieu and Ontario Navigation Co., Montreal, born at Kingston, Ont., July 1, 1868.

W. R. Haldane, District Freight Agent C.P.R., Detroit, Mich., born at Galashiels, Scotland, July 6, 1867.

J. H. Hanna, ex-Division Freight Agent G.T.R. at Hamilton, Ont., now at Calgary, Alta, born at London, Ont., July 27, 1867.

R. K. Harris, Chief Engineer Orford Mountain Ry., Kingsbury, Que., born at Maitland, Ont., July 20, 1866.

A. D. Huff, Commercial Agent G.T.R., Pittsburg, Pa., born at Chatham, Ont., July 17, 1866.

C. A. Jaques, General Manager Merchants-Montreal Line Steamers, Montreal, born there July 15, 1849.

J. P. Kavanagh, Local Manager Ogdensburg Coal and Towing Co., Montreal, born at Plattsburg, N.Y., July 17, 1862.

D. T. Lawrence, Manager National Despatch-Great Eastern Line, Boston, Mass., born at Marysville, Ohio, July 20, 1871.

J. M. Lyons, General Passenger and Ticket Agent I.C.R., Moncton, N.B., born at Halifax, N.S., July 1, 1850.

T. J. Maguire, Accountant Quebec Central Ry., Sherbrooke, Que., born at Quebec, July 31, 1860.

C. N. Monsarrat, Engineer of Bridges C.P.R Montreal, born there July 2, 1871.

R. Preston, Master Mechanic C.P.R., Toronto, born there July 28, 1863.

J. E. Quick, General Baggage Agent G.T.R., Toronto, Ont., born at Richmond, Ontario Co., N.Y., July 10, 1851.

R. Reid, National Transcontinental Railway Commissioner, Ottawa, born at London, Ont., July 28, 1855.

W. C. Ross, Mechanical Foreman I.C.R., Richmond, N.S., born at Quebec, July 26, 1863.

G. G. Ruel, Assistant Solicitor Canadian Northern Ry., Toronto, born at St. John, N.B., July 5, 1866.

P. E. Ryan, Secretary National Transcontinental Railway Commission, Ottawa, born there July 26, 1876.

F. W. Snider, Superintendent Atlantic Division C.P.R. telegraphs, St. John, N.B., born in Halton Co., Ont., July 14, 1854.

Geo. Stephen, Assistant General Freight Agent Canadian Northern Ry., Winnipeg, born at Montreal, July 5, 1876.

T. Tait, Chairman Board Railway Commissioners for Victoria, Melbourne, Australia, born at Melbourne, Que., July 24, 1864.

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Defects of United States Rails.

From the Railroad Gazette, New York

It is perhaps safe to say that there is no more striking example in this country of the dangerous and harmful possibilities of a great corporation than that which is now being afforded by the United States Steel Corporation in its attitude toward demands for sound rails. There is no individual, or combination of individuals, which knows better how to make good rails than does that corporation with its splendid army of experts. Nevertheless, it knowingly makes rails which break and kill people. The top of ingots are not being cropped off below the point where high phosphorus and impurities are found; specifications, as furnished by railroad companies, are totally disregarded, and rails, especially in the new and heavier sections, are furnished with spots in them so full of impurities and so brittle that they must of necessity break when subjected to the strain of traffic. The Steel Co. knows this quite well. The railroad companies also know it quite well. The Steel Co. declines to take cognizance of the fact, because this would mean considerable reduction of output, although no important loss of material. The railroad companies fail to take a firm stand because, in the interests of the tremendous traffic, which they derive directly and indirectly from the steel companies, they have not yet dared to do so.

Two points here are specially noteworthy: first, the criminal willingness of the Steel Corporation and the companies allied with it to manufacture rails that cost human life; second, the attitude, almost equally criminal, on the part of many high railroad officers, to ignore the plain truths that are being brought before them by their superintendents and chief engineers. At the recent meeting of the American Railway Association in Chicago it was asked by G. L. Peck, General Manager of the Pennsylvania Lines West, that any representative of the 230,000-odd miles of railroads in the U.S. present at the meeting who was satisfied with the rails he was receiving, should get up; nobody got up. The representatives of the steel manufacturers who were asked to defend their processes of manufacture had nothing to say.

It is obvious that such a state of affairs as this cannot continue, for public safety is involved. Since 1901, it has been impossible for railroad companies to have their specifications adhered to. The tremendous increases in rail breakages during these five years, when the Steel Corporation has had the matter in its own hands, are well shown in the statistics of rails broken and taken from track in New York State. During Jan., Feb. and Mar., 1907, 806 rails, rolled in the previous year, were broken and taken from track in the state of New York as against 29 rails, rolled in 1901, which broke during the same period. This record may be directly characterized as disgraceful—a disgrace to the reputation of the rail manufacturers, who are fully able to remedy the known defects if they wish to do so. The only answer which the rail manufacturers have brought against the charge is that traffic has grown materially heavier in the last few years, and that track structures, ballast, etc., are insufficient for the strain which is put upon them, with the result that high spots and low spots occur in the track, causing breakages which cannot be avoided. They suggest as a remedy the use of a still heavier rail section, weighing perhaps 150 lbs. to the yard. But it has been conclusively shown that the 100-lb. rails of 1905, 1906 and 1907 have made a far worse record in breakages than the 80-lb. rails rolled five years ago; therefore, it is evident that no help is to come from increased weight of section until better processes of manufacture are co-ordinately employed. The exact details of specification, already quite generally agreed on, and the proper shape of the cross-section, not so fully agreed to, need not be discussed at present. The trouble at the root of the present situation does not lie here. Heavy rails of the present day are materially deficient owing to three causes, capable of considerable sub-division, which can be outlined roughly as below:

Phosphorus and impurities which collect in the top of the ingot during cooling require that about one-third of the ingot should be cut off before the rails are rolled. Present practice in the steel mills cuts off a much smaller amount than this, leaving the ingot full of impurities, and with its phosphorus much higher than that allowed by the best specifications.

With the Bessemer process and the ores now used, it is extremely difficult to keep down the phosphorus. A high phosphorus content with high carbon added to give hardness and wearing qualities makes brittle steel. Open hearth rails, of course, furnish the solution of this difficulty.

In the efforts for output, rails are being finished at too high a temperature, and are not receiving enough work in the rolls. Before this can be completely remedied, it is probable that some change in the form of the cross-section will be necessary, but many of the gravest defects arising from rolling can be remedied while the section remains in its present shape.

The recent action of Mr. Harriman in ordering 150,000 tons of open hearth rails from the Tennessee Coal & Iron Co. and in throwing down the gage to the Bessemer steel makers adds much interest to the present situation. Mr. Harriman and his system are both big enough to be above the necessity of the traffic diplomacy that ties most of the railroads hand and foot, in a crisis like this. He reported 449 rails broken on his lines during Feb., of which 179 were 90-lb. rails that had been in the track only five or six months, and accepted Mr. Kruttschnitt's suggestion that damage claims should be instituted against the steel companies for the preventable harm thus done. By taking this position, he has greatly strengthened the hands of the committee of the American Railway Association.

The U.S. Steel Corporation definitely refuses to make rails according to specifications of chemical composition and details of rolling, while at the same time it is selling rails to the Japanese government for $10 a ton less than the price in this country, and is adhering to the required Japanese specifications.

A careful reading of letters from railroad officers makes it apparent that the roads which have suffered have been those combining heavy rails and heavy axle loads; that is to say, that the rails now made to carry maximum traffic are not capable of always performing their task. The need for a better and more scientifically unified railroad superstructure to carry great train loads is admitted by all. Defects in superstructure do not excuse gross imperfections in 100-lbs rails.

Rail makers claim that excessive rail breakages are due to the increased fibre stresses under modern heavy engines and cars. The record of at least one western road is contrary to this assertion, as shown by the following extract from a letter recently received from the general manager:

"The average rail section rolled at this time for main track weighs from 80 to 90 lbs. to the yard, and the average engine axle loading is from 40,000 to 50,000 lbs. The average rail section rolled 18 to 20 years ago for main track weighed 60 lbs. per yard, and the record of locomotive builders for that period shows that the average engine axle loading was from 25,000 to 32,000 lbs. The resulting fibre stresses under these two conditions are practically the same.

"The record of breakages of 60-lb. and 80-lb. rail on this system for the year 1906 discloses rather surprising results, bearing in mind that the same engines with more than 40,000 lbs. axle loads were used in regular service on both weights of rail:

"Mileage of 80-lb. rail rolled 1898 to 1906, 30% of total.

"Mileage of 60-lb. rail rolled 1881 to 1887, 70% of total.

"Breakages of 80-lb. rail, 25% of total number rails broken.

"Breakages of 60-lb. rail, 75% of total number rails broken.

"One 80-lb. rail was broken for each 20.5 miles of track laid with 80-lb. rail; one 60-lb. rail was broken for each 16.3 miles of track laid with 60-lb. rail, but when we consider that the fibre stress in the 60-lb. rail exceeded the stress in the 80-lb. rail, under actual loading, by 49%, it is apparent that the 80-lb. rail, subjected as it is to so much heavier deflection under its load than the 80-lb. rail, must be a rail of better quality than the 80-lb. rail with which it is compared."

The 80-lb. rails of recent rolling had, on the whole, a better chemical composition than the old light rails of 20 years ago. The difference in quality appears, therefore, to be due to differences in the mechanical and heat treatment during manufacture. Throughout the many recent discussions of rail failures, reference has frequently been made to the old John Brown rails imported from England between 1860 and 1870. These rails, low in carbon and all other hardening constituents, have given from 30 to 35 years' service before wearing out, not breaking. They were made by hammering the ingot into a bloom and rolling and rerolling at low temperature with frequent reheating. An output of 100 tons a week was exceptional. The whole secret of their long life was in the mechanical work put into the metal at low temperature, permeating to every part of the finished rail. Contrast this with the present methods of rail making. The ingot, 20 in. to 24 in. square, heated to a white heat and insufficiently cropped, is bloomed by a few heavy passes in one mill and immediately run into the rail-mill where it is finished, in some cases, in seven passes, and run to the cooling beds at a bright red heat. Such methods will produce 1,800 tons a day, but at the expense of violating most of the fundamental principles of the steel makers' art. Last year at the meeting of the Iron and Steel Institute, A. L. Colby, in defending the output of U.S. rail mills, said:

"The gradual increase in the daily output of U.S rail-mills during the last decade is not due to an increase in the speed of the rail train, prompted by a reckless desire for increased tonnage, independent of the quality, strength and finish of the product, but to radical improvements resulting in a much better balance between the producing and finishing ends of the mill."

It is not alone, however, the speed of the rail train which determines the quality of the finished rail. Fifteen or 20 years ago the almost universal practice was to re-heat the blooms before rolling into rails, and 13 to 15 passes were usually given in the mill. The engines and rolling mills of those days were not powerful enough to reduce an ingot in three passes, and a bloom in seven passes. No attempt was made to finish a white hot ingot in one heat far above the critical temperature of 825 degrees. It is putting the cart before the horse to hold the rails before the last pass; the previous overheating and lack of effective mechanical work leave the mass of metal in the interior of the head coarse and weak and cold rolling can only give a thin, hard shell, which soon wears off exposing the soft metal underneath. With modern mill practice the only way to secure hardness and wearing qualities throughout the head is to increase the carbon to a point where the rail is brittle because of the unavoidable presence of high phosphorus.

The value of annealing rails before finishing and thereby overcoming most of the faults of overheating and rapid working has long been recognized, but sadly neglected because it introduces a halt in the contin-

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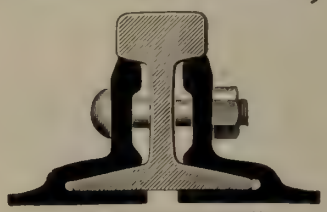
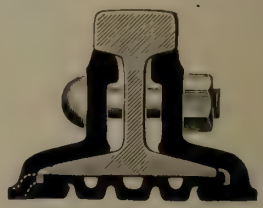


CONTINUOUS JOINT

WEBER JOINT



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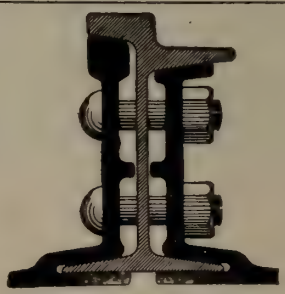

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uity of the whole process of rail making from the blast furnace to the gagging presses. Robert Job has said:

"The toughness and elasticity of the fine granular structure produced by annealing at the proper temperature permit an increase in the hardening contents considerably beyond the point which otherwise would be safe, thus obtaining greater capacity for wear. Unfortunately, annealed rails, with their freedom from brittleness and internal strain, are of hardly more than theoretical interest, since they cannot be obtained in any considerable quantities under present conditions."

In view of the present deplorable conditions it would seem that any process of improving the quality of rails is of more than theoretical interest.

Salisbury and Harvey Railway.

An order was granted by the New Brunswick Equity Court, June 11, directing the sale of this line and passing the accounts of the Receiver from May, 1901, to June, 1907. This was a foreclosure suit and arose out of a mortgage given by the People's Trust Co., plaintiffs, to the Salisbury and Harvey Ry. Co., the Western Union Telegraph Co., and the Investment Improvement Co. of New York, to secure the payment of bonds to the amount of $250,000 and interest on mortgage given in 1890. In 1899 J. R. Ebony was appointed receiver, and the property was ordered to be sold. The order was cancelled later. In 1901 A. S. Swan was appointed receiver upon withdrawal of Mr. Ebony. A petition was presented by J. D. Hazen on behalf of the present receiver and owner of controlling interest in the bonds, A. S. Swan. The order was granted upon the facts set forth in the petition and with permission of J. M. Price, who appeared for the People's Trust Co. of Brooklyn, N.Y., and J. R. Ebony, the former receiver and a bondholder.

The S. and H. Ry. was originally incorporated as the Albert Ry. Co. in 1868, and was granted a Dominion subsidy in 1884, a subsidy by way of loan in 1886, a subsidy of rails at a valuation in 1888, and there was a revote of an unpaid balance in 1889. The company was reorganized by letters patent under the New Brunswick Companies' Act, as the Salisbury and Harvey Ry., and these were recognized and confirmed by the Dominion Parliament in 1891, when the company was given power to issue bonds. In 1900 the Dominion Parliament passed another act giving the company power to acquire other railways. The railway extends from Salisbury to Albert, N.B., 45 miles, of which 27 miles is laid with iron rails and 16 miles with 56-lb. steel rails; there are six miles of sidings. The railway at June 30, 1906, reported to the Dominion Government that it owned the following rolling stock: 3 locomotives, 1 first-class car, 2 baggage, mail and express cars, 5 box cars, 28 flat cars, 1 conductor's van, 1 snow plow and 1 flanger. Its operations for the year ended June 30 showed the following results: train mileage, 28,170 miles; engine mileage, 33,539 miles; passengers carried, 13,324; freight carried, 54,828 tons; income, $30,706.71; net earnings, $961.89. The financial statement at the same date was reported to the Dominion Government as: common stock, subscribed and paid up, $150,000; bonds issued, $250,000; Dominion Government subsidy, $29,665.45, including $14,665.45 of used iron rails, of which $29,391.01 had been paid; New Brunswick provincial subsidy, $455,000; municipal bonus, $70,000; total paid up, $704,391.01; cost of railway and equipment, $1,802,440.10.

The Dominion Government has paid $1,128,876 for 9 months ended Mar. 31, as against $1,227,560 for the preceding 12 months, as subsidies to various steamship companies.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,900	324,200	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	13,800−
Jan...	351,400	410,300	58,900−	158,200−
Feb..	333,200	363,600	30,400−	113,900−
Mar.	488,800	394,800	94,000	23,400−
April	569,900	465,200	104,700	91,000−
	$5,659,400	$4,232,400	$1,427,000	$ 58,800−

Approximate earnings for May $870,600 against $610,100 for May, 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug.	6,170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122.94	98,188.05−
Dec.	5,992,098.07	3,726,503.73	2,265,594.34	80,988.97−
Jan..	4,205,527.07	3,657,199.46	548,327.61	718,906.41−
Feb..	4,268,206.74	3,646,218.62	621,988.12	583,755.66−
Mar.	6,132,910.76	3,887,174.54	2,245,736.22	401,071.72+
Apl..	6,391,561.39	4,024,635.52	2,366,925.87	24,367.03+
	$58,462,680.03	$38,093,835.51	$20,368,844.52	$1,521,244.28+

Approximate earnings for May $6,889,000 against $5,545,000 for May, 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for April, $276,577 13, net earnings, $73,296.62 against $237,551.06 gross and $65,227.32 net for April, 1906. Net earnings for ten months ended April 30, $800,189.28 against $822,693.54 for same period, 1905-06. Approximate earnings for May, $322,865, against $265,215 for May, 1906.

MINERAL RANGE RY.—Approximate earnings for May, $78,597 against $61,593 for May, 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for April, $1,236,428.73; net earnings, $483,712.24, against $959,701.79 gross and $410,688.15 net for April, 1906. Net earnings for ten months ended April 30, $4,454,368.23 against $4,983,473.76 for same period 1905-06. Approximate earnings for May, $1,152,894 against $890,393 for May, 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for April, as compared with April, 1906.

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$2,961,700	$2,533,861
Expenses	2,006,500	1,637,781
Net earnings	$ 955,200	$ 896,080

CANADA ATLANTIC RAILWAY.

Earnings	$ 133,670	$ 133,438
Expenses	141,100	121,237
Net earnings.....Def.	$ 7,430	$ 11,201

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 518,400	$ 387,652
Expenses	460,250	329,699
Net earnings	$ 58,150	$ 57,953

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 134,100	$ 126,620
Expenses	117,150	88,147
Net earnings	$ 16,950	$ 38,473

Approximate earnings for May, $3,908,674, against $3,403,704 for May, 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to May 31:

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£2,760,712	£2,447,959	£312,753	...
Canada Atlantic	141,228	147,462	...	£6,234
G. T. Western.	495,456	429,060	66,396	....
D. G. H. & M.	139,026	129,781	9,245	....
Total.....	£3,536,422	£3,154,262	£382,160	

The Crow's Nest Pass Coal Co. has been authorized by supplementary letters patent to increase its capital stock from $3,500,000 to $4,000,000.

The M.C.R. Detroit River Tunnel.

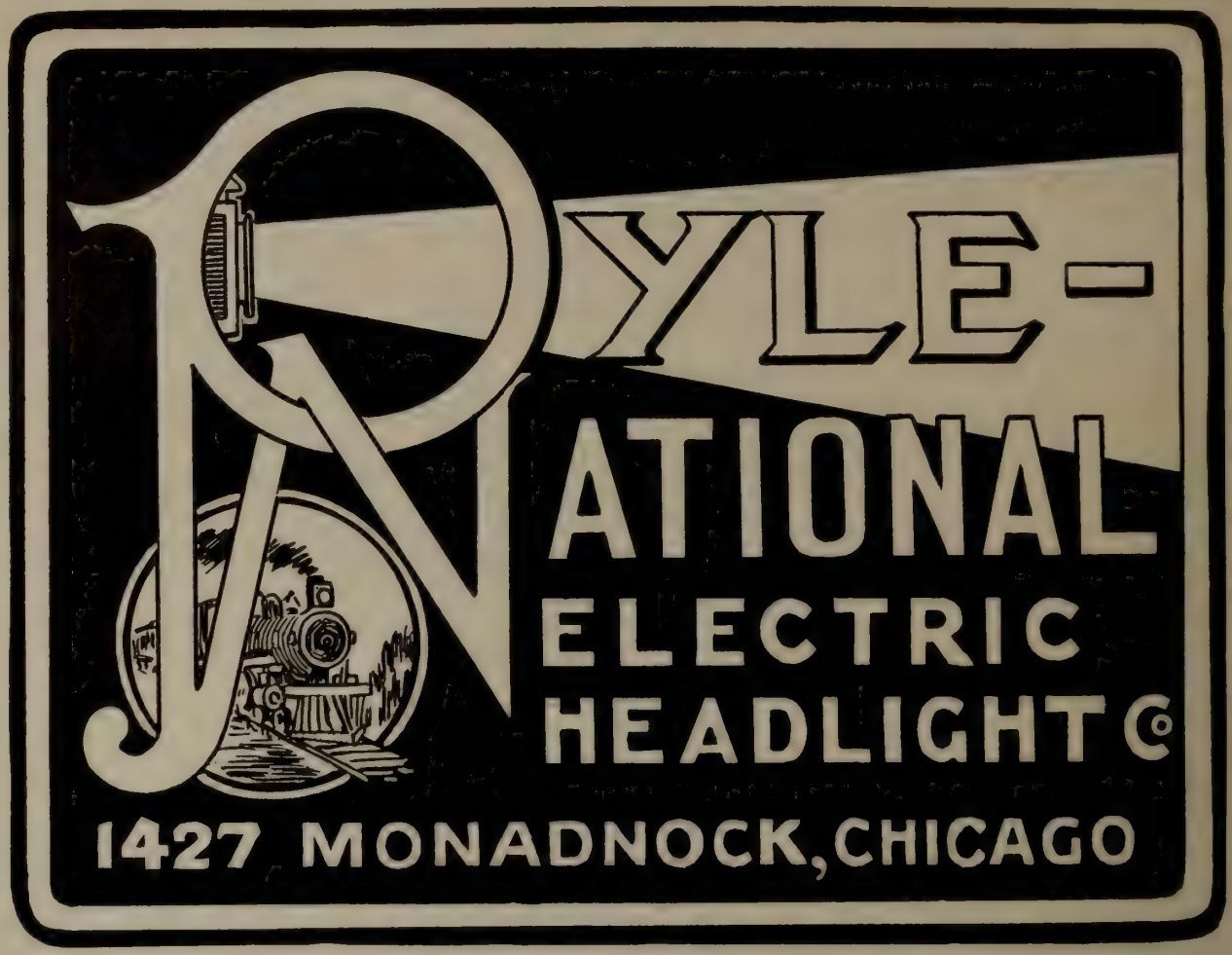
The tunnel being built under the Detroit River for the Michigan Central Rd. passenger and freight service, was illustrated and described in our issue of April, 1906, pg. 181. The following additional information has been received in regard to its electrical equipment. The electric section will be 4.5 miles long and will comprise within the yards some 15 miles of single track. Electric locomotives for operating through the tunnel were decided upon because they would not only permit of greater celerity in handling traffic, but also afford a complete solution of the ventilation problem. Six 100-ton direct-current locomotives of the swivel truck type, with geared motors, will comprise the initial equipment for hauling both freight and passenger trains. Each locomotive will be capable of hauling a 900-ton train up a 2% grade at a speed of 10 miles per hour. Four 280-horsepower motors will be mounted on each locomotive, two motors being placed on each of the two swivel trucks. The electric multiple unit control system will be furnished in enabling the locomotives to be operated singly or in train. Current for operating the motors will be taken from a third rail by means of contact shoes. Automatic, high-speed air brakes will form a necessary part of the equipment

Current for operating the system will be purchased from the Detroit Edison Co., and will be delivered to a substation at Detroit at a potential of 4,400 volts, and at a frequency of 60 cycles. At the substation two 1,000-kilowatt synchronous motor-generator sets will be installed for supplying direct current to the third rail at 650 volts. A 15-kilowatt, 125-volt exciter for the synchronous motor will be mounted on a shaft extension of each of the motor-generator sets.

A very complete electric lighting and electric pumping equipment forms a part of the project. The yards and approaches to the tunnel will be lighted by arc lamps, while the tunnel itself will be illuminated by incandescent lamps arranged on duplicate circuits. Alternating current from the main power supply, at a frequency of 60 cycles, will be used on the lighting circuits. To insure an uninterrupted lighting service, the lighting circuits in the tunnels are so arranged that half the lamps in both tunnels will burn if, by chance, either of the lighting circuits in the tunnels should be broken. A single 3-phase distributing circuit will run through each tunnel and from these circuits suitable connections will be made to step-down transformers. The secondaries of the step-down transformers will be interconnected with duplicate circuits for half the lamps in each of the tunnels.

For keeping the tunnel dry five sumps will be provided, each sump drained by induction motor centrifugal pumps arranged in duplicate. The motors on the pumps will operate directly at 4,400 volts and the controlling circuits with compensators will be centralized in the substation. For indicating the amount of water in each sump, a float system will be provided having both visible and audible indicating devices in the substation.

At the substation a regulating storage battery will be provided to carry the fluctuations of the load. If the main power supply from the Detroit Edison mains should be interrupted this storage battery will have sufficient capacity to operate the entire system for half an hour. In such an emergency the lighting and pumping alternating current equipment will be energized by 60 cycle, alternating current from a 50-kilowatt motor-generator set, the driving motor being supplied with current from the storage battery, Flexible switching arrangements will be installed to enable this interchange of power supply to be easily and quickly made.



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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Algoma Central and Hudson's Bay Ry.—The Superior Copper Co. proposes to construct a spur line from mileage 38.4 on the A.C. and H.B.R. main line, known as Superior Mine station, to its mining property, 4¾ miles. J. F. Wilde was reported recently to be making a survey, and it was stated that the Government would be asked to grant a right of way. The Lake Superior Corporation, owning the A.C. and H.B. Ry., it was stated, had consented to supply all labor and equipment, and to do all the work under the supervision of the directors for a percentage of the cost of the road. It is expected the road will be completed and in operation by Sept. 1, and will cost $75,000. We were advised June 19 that it had not been decided who would undertake the work of constructing the line, but that it was quite likely that it would be done by the A.C. and H.B.R.

The Atlantic, Quebec and Western Ry.'s application for approval of its location from Matapedia to Edmundston, N. B., has been adjourned in order to enable a new map to be submitted showing the relation of the projected route to existing lines and the approved route of the National Transcontinental Ry. The route for which approval was asked was objected to by H. D. Lumsden, Chief Engineer National Transcontinental Ry. Commission, on the ground that it would parallel the National Transcontinental Ry. route for 23 miles from near the mouth of the Grand River up the St. John River to Edmundston, N.B. (June, pg. 407).

Canada Coal and Rd. Co.—See Maritime Coal, Ry. and Power Co.

Duluth, Rainy Lake and Winnipeg Ry.—The grading of this line to Pither's Point, opposite Fort Frances, Ont., is being pushed and the steel has been laid to within 30 miles of the Rainy River. The bridge over the Rainy River in which this company is jointly interested with the Canadian Northern Ry., is being progressed with, and it is expected that the railway and bridge will be completed so as to enable regular passenger trains to be run by the fall. The bridge, which is being erected at Rainier, about three miles east of International Falls, is for single track, and composed of eight 40 ft. deck plate girder spans and a roller lift bridge with one arm about 125 ft. long.

The Duluth-Thunder Bay Ry. Co. has been incorporated in the State of Minnesota for the purpose of constructing a railway from Superior, Wis., to Duluth, Minn., and thence along the north shore of Lake Superior to Fort William and Port Arthur, Ont. It is stated that the company has been formed in connection with the Wisconsin and Northern Minnesota Ry., and that the immediate object is the establishment of independent terminal facilities at Superior and Duluth. C. E. Wales, Vice-President of the Pittsburg Coal Co., is President.

Great Northern Ry. (U.S.A.) Lines in Canada.—A passenger service has been put on the Brandon, Saskatchewan and Hudson Bay Ry. which is the Canadian extension of the G.N. Ry. branch line formerly terminating at St. John, N.D. The line is 69.45 miles in length, at present terminating at Brandon, Man., where freight yards are being laid out. A contract is expected to be let at an early date for the erection of freight warehouses, and a passenger station at Brandon.

Under the title of the Midland Ry. of Manitoba, a line has been completed from Gretna on the International boundary to Portage la Prairie, Man., 77 miles, upon which a freight and passenger service is being operated. A steel bridge with trestle approaches giving a total length of over 800 ft. has been completed over the Assiniboine River at Portage la Prairie. Grading is in progress upon a line from Walhalla, N.D., to Morden, Man., 24 miles, under the charter of the M. Ry. of Manitoba, and it is expected that tracklaying will be commenced at an early date.

F. H. McGuigan, Vice-President G.N.R., was in Winnipeg, June 4, on a trip of inspection, and in company with P. E. Thain, Chief Engineer, in charge of Manitoba construction, went over the Portage la Prairie and Brandon lines. Mr. McGuigan stated his business was to get acquainted with the company's lines, and he could not say anything as to the prospects of the construction of a line into Winnipeg, nor as to the layout of the terminals there. (June, pg. 407).

Halifax and Southwestern Ry.—A contract has been let to the Lindsay Construction Co. for the erection of a steel bridge at the Dutch Village Road, just outside Halifax, N.S. The bridge will be erected on concrete abutments. (May, pg. 325).

Innisfail to Rocky Mountain House.—Capt. B. J. Saunders reached Edmonton, Alta., June 6, and is reported to have stated that the object of his five weeks' trip was to ascertain the feasibility of the construction of a railway running north and south, between the G.T. Pacific Ry. and the main line of the C.P.R. He was not at liberty, he said, to state who was projecting the new railway, but he could state that the result of his explorations showed that such a line could be constructed on the east side of the mountains. The party started from Innisfail, and worked to Rocky Mountain Lodge, an abandoned Hudson's Bay Co. post, about 200 miles up the Saskatchewan River.

Intercolonial Ry.—Tenders have been called for the construction of some additional buildings on the site of the new shops, Moncton, N.B. These buildings include a power house, gas producer house and dry kiln. The power house will consist of a steel frame building, 202½ by 69 ft., with curtain walls and roof of concrete. The gas producer house will consist of a steel frame building 39½ by 38 ft. 2 in., with curtain walls and roof of concrete. The transformer shelter will be 10 by 20 ft. of concrete, steel and wood. The dry kiln will be 75 ft. 10 in., by 25 ft. 4 in., of brick and wood, with a fan house extension

The plans for the new passenger station to be built at Amherst, N.S., for which tenders are under consideration, show an attractive design. The building will be of pressed brick with concrete foundation, the roof being covered with slates. A 10-ft. verandah will be carried around the sides and ends of the building. The total length along the track will be 183½ ft., with a depth of 28½ ft., except for about 22½ ft. in the center where it is 33 ft. In this center portion will be located the operators' office, 13 ft. 10 in. by 22 ft., ticket office, 10 ft. 10 in. by 22 ft., hall and staircase. Archways off the hall lead, on the one side, to a general waiting room 39 ft. 4 in. by 28½ ft., off which is a smoking room and lavatories, 26 ft. 8 in. by 28½ ft. and on the other side to a ladies' waiting room, 32 ft. 10 in. by 28½ ft., off which is a dressing room, 8 ft. by 24 ft., and lavatories. Separated from this accommodation by a brick wall is an express room 12 ft. 3 in. by 18 ft. 8 in., office 12 ft. 3 in. by 7 ft., and baggage room 41 ft. 3 in. by 26 ft. In the center part of the building upstairs is an office for the Western Union Telegraph Co., 15 by 20 ft.; the remaining part of the accommodation there is unallotted. The building will be heated with hot water and lighted by electricity. The interior finish throughout will be of various kinds of native woods, oiled and varnished. (May, pg. 325).

A contract is reported to have been let to J. B. McManus, Moncton, N.B., for the construction of a second track between Moncton and Painsec Jct., N.B., eight miles.

Kingston, Smith's Falls and Ottawa Ry.—Upon the hearing of the company's application for approval of its route between Kingston and Ottawa, Ont., May 28, M. K. Cowan, K.C., stated that the G.T.R. was interested in the company, and if a proper location was given would construct the line. The location plans are under consideration by the Board of Railway Commissioners.

London and Port Stanley Ry.—The Pere Marquette Rd., lessee of the L. and P.S.R., is constructing the abutments of a new bridge over the Thames just south of London, Ont. It is proposed to undertake the reconstruction of the bridge over Kettle Creek, St. Thomas, as soon as that over the Thames is completed. The question of the liability of the city of London, the virtual owner of the line, for the cost of the bridges is to be fought out, probably in the courts. The present bridges are too light for the traffic, and the lessee asked that they be reconstructed, but the city refused to do anything, whereupon the General Manager of the P.M.R. notified the company that it would do the work and charge the cost to the city. (May, pg. 325).

Maritime Coal, Ry. and Power Co.—This company took over June 1 the mining property and railway of the Canada Coal and Rd. Co., formerly known as the Joggins Ry., in Nova Scotia. The M.C. Ry. and P. Co. also owns the Chignecto coal mines and the railway connecting them with the Intercolonial Ry. The additional line acquired extends from Maccan to a shipping port on the Bay of Fundy, but it is proposed to extend the system to Northumberland Strait, thereby securing a shipping port that will put the company in close touch with the coal markets of the St. Lawrence River.

Michigan Central Rd.—The last section of the second track on the Canada Southern Ry., leased by the M.C.R., was completed June 4, when the last rails were laid near Waterford, Ont.

Midway and Vernon Ry.—Press reports state that arrangements have been completed to pay off the indebtedness of this company and to re-start construction.

Napierville Junction Ry.—Following are the officers and directors: President, L. F. Loree, New York; Vice-President and Assistant Treasurer, G. F. Hartt, Rouse's Point, at N.Y.; Secretary, L. J. Beique, Montreal; other directors: W. C. Witherbee, Port Henry, N.Y.; J. R. Myers, Rouse's Point, N.Y.; Hon. F. L. Beique, C. B. Hibbard, C. J. R. Bethune, Montreal; Treasurer, C. A. Walker, New York. The President and Treasurer are President and Treasurer respectively of the Delaware and Hudson Co., and C. B. Hibbard is General Manager of the Quebec, Montreal and Southern Rd., which recently was purchased by the D. and H. Co. The N.J. Ry. extends from the D. and H. Rd., near Lacolle at the International boundary between Quebec and N.Y., to St. Constant, Que., 27 miles, and was put in operation May 20. It is understood that the line will be extended to a junction with the Quebec, Montreal and Southern Ry. (Jan., pg 3.).

The New Brunswick Southern Ry. has secured the building originally used as a passenger station by the old St. John and Maine Ry., from the C.P.R., and has fitted it as a passenger station. It is only a few months ago that the company moved into a building near the ferry floats, which it obtained from the city council, in exchange for its old station facing the new Clarke wharf.

Nova Scotia Eastern Ry.—We are advised that the object of the surveys being made under the direction of the Nova Scotia Provincial Engineer in connection with this projected road is to locate the best line so

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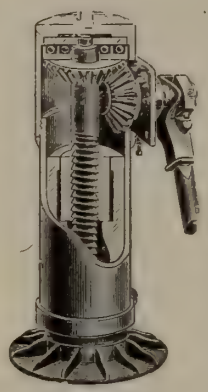
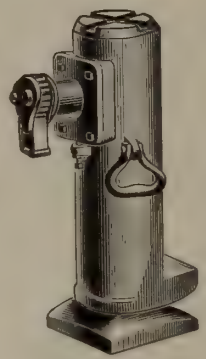


Sectional View



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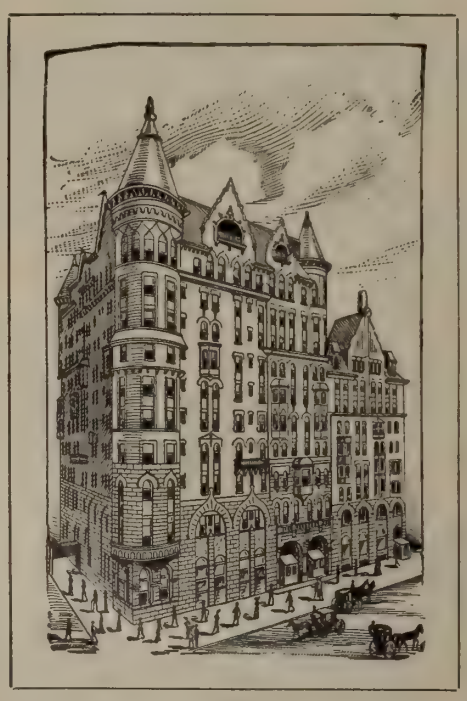

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as to expedite the work in case the Government wishes to make a contract with any company for the construction of the line, and to enable the Government to estimate the cost so that it will be better able to deal with the contractors, or failing to secure a good company to construct the line the Government would be in a position to undertake the construction itself. There are three parties in the field, viz.: (1) In charge of L. Whitman, which is locating a line through Cole Harbour, Lawrencetown, Chezzetcook, Musquodoboit Harbor, Little River, Meaghers Grant, Middle and Upper Musquodoboit to Dean's Settlement. (2) In charge of J. J. Taylor, is locating a line from Guysboro towards Country Harbor Cross Roads. (3) In charge of W. R. Hendry, is working from Sunny Brae towards Country Harbor Cross Roads to meet the second party; and on effecting a junction the second and third parties will complete the location to the line being surveyed by the first party at Upper Musquodoboit. (June, pg. 409).

Nova Scotia Steel and Coal Co.'s Ry.—A contract is reported let to D. Sutherland, North Sydney, N.S., for the construction of a line from Sydney, no. 3, to the company's new colliery, no. 4, at Sydney Mines, a distance of about 2¼ miles. The contract includes clearing, grubbing, grading, excavating, tracklaying and ballasting, and it is expected that the work will be completed in about two months.

Pere Marquette Rd.—Plans have been prepared for the erection of a 24-stall roundhouse at St. Thomas, Ont., and for the conversion of the existing round-house into a coach-building and car repair shop.

Salisbury and Harvey Ry.—The reconstruction of the bridges on this line is being proceeded with under the direction of P. S. Archibald, C.E.; the old wooden Howe truss bridge over the Petitcodiac River at Salisbury, N.B., is being replaced by a 125 ft. steel span on stone abutments; a new 100 ft. span of pitch pine is being built over Turtle Creek, to replace the present spruce span. A new bridge will be constructed during the present season at Weldon.

Temiskaming and Northern Ontario Ry.—There are three survey parties working between Cobalt and Sudbury, one from Cobalt to the narrows of Temagami Lake, the second from the narrows of Temagami Lake south-westerly towards Sudbury, and the third from Sudbury north-easterly to meet the second party. Trial lines are being run so as to determine the most suitable location for a railway. The work being done at present is purely of an exploratory nature. (June, pg. 409).

The commissioners left Toronto June 11 for a trip over the line. They met the members of the Transcontinental Railway Commission at North Bay, and together went to the end of the track. The question of the junction of the T. and N.O. Ry. with the G.T. Pacific Ry., Eastern Division, near Lake Abitibi, was discussed.

A contract has been let to the O'Boyle Bros. Construction Co. of North Bay, Ont., for the erection of a stores building there to cost about $20,000. The building will be 105 by 35 ft., with basement and two stories. Concrete will be used for the foundations and walls, reinforced concrete floor slabs will be used, supported by steel beams and columns encased in concrete. The basement and ground floor will be used for heavy general stores and the upper floor for the master mechanic's offices and light stores.

Winnipeg City Power Plant.—The Winnipeg City Council has let a contract to W. Newman, for the construction of the tramway between Point du Boise and Lac du Bonnet, Man., in connection with the city's hydro-electric power plant.

C.P.R. Betterments, Construction, Etc.

Chateau Frontenac Extension.—The Quebec City Council granted May 30 the application of the C.P.R. for permission to erect a viaduct over Des Carrieres St., for the purpose of connecting the Chateau Frontenac with the proposed extension. W. S. Painter, the company's architect, stated that the extension planned was to be 250 ft. long and from 6 to 10 stories high, and would have 120 additional rooms. The plans had yet to be finally approved by the directors, but Mr. Painter stated that it was intended to have the new building completed by 1909.

New Industrial Siding at Montreal.—The C.P.R., as lessee of the Ontario and Quebec Ry., is applying to the Board of Railway Commissioners for an order authorizing it to construct a siding along the bank of the Lachine Canal, for about 1,400 ft., to the Dominion Car and Foundry Co.'s plant.

Guelph and Goderich Ry.—The line is practically completed in all details as far as Blyth, about six miles east of the terminus at Goderich, Ont., but it is not likely that a regular train service will be operated further west than Milverton, until the whole line is completed. The heavy work of carrying the line across the valley of the Maitland River at Goderich necessitated the construction of embankments, bridges and retaining walls, and was of such a character as to delay the work considerably. It is hoped to have the work finished by Aug. 1, but the engineers in charge are by no means confident that this can be done.

The branch from Linwood to Listowel is expected to be ready for the rails in Sept. The grading is light, the principal work being in clearing out the stumps left when the right of way was cut out.

Toronto-Sudbury Branch.—Work has so far progressed on the line from Bolton Jct., on the Owen Sound branch, towards Parry Sound, that a train service has been put on to Muskoka, 103.7 miles. At Bala the trains will connect with the Muskoka Lakes Navigation and Hotel Co.'s steamboats. Construction is in progress northward through Parry Sound to the French River, to which point the line has been completed from Romford, the point of junction with the transcontinental line near Sudbury. It is expected that the whole line will be completed within the next twelve months.

Woodbridge to Bolton.—A contract has been let to G. A. Begy & Co., St. Catharines, Ont., for reducing gradients and straightening out curves on the Owen Sound branch between Woodbridge and Bolton, Ont., about 10 miles. The work consists of earth excavations, concrete, fencing, etc., and is to be completed by Oct. 1. It is contemplated to construct a second track from Toronto Junction to Bolton Jct., 22.8 miles so as to provide for the increased traffic consequent on the approaching completion of the Toronto-Sudbury branch.

Winnipeg Shops.—The contract for the erection of the additional shop buildings at Winnipeg has been let to J. McDiarmaid & Co., Winnipeg, and the work will be gone on with at once.

Saskatoon to Battle River.—F. J. George, engineer in charge on the line under construction from Saskatoon, Sask., westerly, recently stated, after a trip over the route, that Contractor McArthur had the contract covered with men from mileage 135 to Battle River, mileage 235, and it was expected to have the grading completed this season. The grading between Saskatoon and Round Valley, about 135 miles, was expected to be completed early in July, and steel laying is being gone on with west of Battle River. Trains are being operated from Wetaskiwin easterly, and it is hoped to make a connection with this branch by the end of the year.

Calgary Station.—The Calgary, Alta., Board of Trade has received notice to move its building at once, as the site is required in connection with the erection of a new station there.

Edmonton Entrance.—W. Whyte, Second Vice-President, had a lengthened conference with the Edmonton, Alta., City Council June 3, relative to the proposed entrance of the C.P.R. line into the city. It is understood that a new agreement will be submitted to the company. The Mayor is quoted as having stated after the meeting that satisfactory progress had been made with the negotiations.

Bridge at Lethbridge.—Tenders are being called for the construction of a bridge on the Crow's Nest Pass line at Lethbridge, Alta. The bridge will be about a mile long, and about 300 ft. high.

Kootenay Central Ry.—It is reported that the C.P.R. is preparing to push forward work on this line, the construction of which was commenced in a small way at Golden, B.C., in 1906. The line, as proposed, starts from the C.P.R. transcontinental line at Golden, and follows the Kamloops Valley to the western foothills of the Rocky Mountains, which it will parallel to the valley of the Kootenay River where it will connect with the company's Crow's Nest Pass branch, probably near Cranbrook, B.C. The distance of the projected line is about 186 miles.

We have been advised that nothing definite has been decided with regard to the railway. It is understood, however, that W. Whyte, Second Vice-President, will make a trip of inspection over the route on an early date, after which a definite course of action with regard to the line will be decided upon.

Tourist Hotel for Kitsalano Beach.—The C.P.R., in agreeing to rent three acres of the beach at Kitsalano beach to the city of Vancouver, has reserved an acre and a half as the site of an hotel. Press reports state that the company is prepared to erect an hotel there at an early date.

Esquimalt and Nanaimo Ry.—Among the improvements being made upon this line is a diversion near Goldstream, the work being included in the appropriations for the year. It is intended to make a permanent line around the present trestle bridges at Waugh Creek and Goldstream, doing away with these altogether, and cross Goldstream with three steel spans, 100 ft., 80 ft. and 60 ft. respectively, on masonry abutments. The cost exclusive of the steel span is estimated at $40,000, and the contractors are Macdonell and Gzowski, Vancouver, B.C.

A survey party has been put in the field under H. Carry, to survey a route for a projected line from Duncan's to the foot of Cowichan Lake. Should a satisfactory line be located between these points it would prove a shorter route to Alberni and Clayoquot Sound than the proposed extension from Nanaimo.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—The Vice-President stated June 6 that no negotiations had been entered into with the Northern Pacific Ry. for acquiring its Little Falls branch. This statement was made in connection with a press report that the M. St. P. and S.S.M. Ry. had suspended work on the proposed extension from Brooton to Duluth, Minn., 180 miles, for which contracts had been let, an arrangement having been made with the N.P. Rd, for the transfer of that company's Little Falls branch line, 88 miles, and traffic rights over the N.P Ry. from Little Falls to Duluth.

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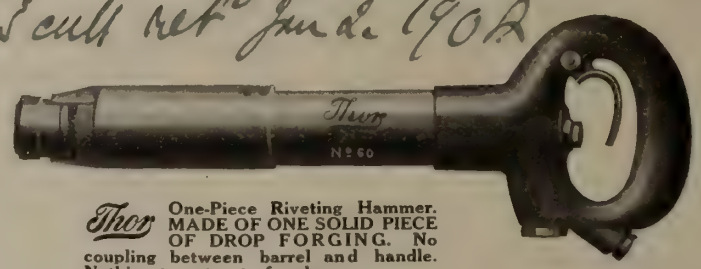

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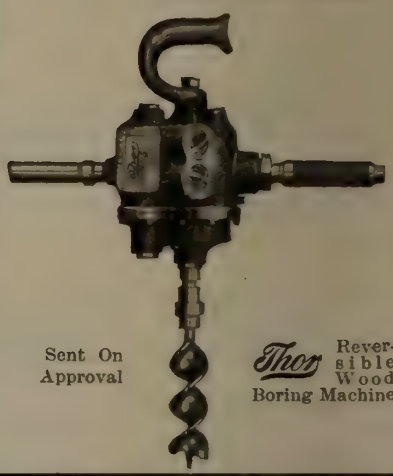

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Canadian Northern Ry. Construction, Etc.

St. John Valley Ry.—G. G. Ruel, Assistant Solicitor Canadian Northern Ry., and A. F. Stewart, of the engineering department of Mackenzie, Mann & Co., Ltd., spent some time recently in visiting the various points in the St. John Valley to be reached by the projected line for which the New Brunswick Legislature has approved a guarantee of bonds to the extent of $15,000 a mile. The route looked over near Woodstock was that of the projected Woodstock and Centreville Ry., which for a great part of the distance parallels the public highway. About one-half the distance was graded years ago. It is expected that engineering parties to locate the route will be sent out in the course of the summer.

Canadian Northern Quebec Ry.—D. D. Mann, Vice-President C.N.R., completed a trip of inspection June 10 over the lines of the C.N.Q.R. and of the Quebec and Lake St. John Ry., in the latter of which a controlling interest has been acquired. The question of the extension of this line from Roberval to the mining belt of the province, about 200 miles, is said to be under consideration. The question of the erection of car shops for the company's lines in the province is also said to be under consideration, but it is understood that the principal shops will be located at Longue Pointe, Montreal, where a large area of land was recently acquired.

Canadian Northern Ontario Ry.—The question of the route of this line between Toronto and Ottawa has been discussed by the Department of Railways and the Deputy Minister has asked the Government to appoint a special engineer to go over the proposed routes and decide which of the three should be adopted, as being best for the public. The routes proposed are via Smith's Falls, Perth and Lanark respectively.

Some negotiations are in progress between C.N.O.R. officials and the Owen Sound and Meaford Ry. Co., by which the charter and rights of that company would be utilized in the construction of a branch of the Toronto-Sudbury line to Owen Sound. The O.S. and M.R. Co. is also negotiating with the G.T.R. Surveys have been made for the line by the Manitoulin and North Shore Ry., one of the Lake Superior Corporation undertakings, and by the Huron and Ontario Ry. Co., which has outlined an extensive plan of electric railways.

Canadian Northern Ry.—D. B. Hanna, Third Vice-President and General Manager, completed an inspection of the line June 1, when he returned to Winnipeg from Edmonton, Alta. He stated that efforts would be made to improve conditions generally as much as possible, and to increase the rolling stock and other equipment. The reports of the construction and improvement work now in progress show that despite a number of disadvantages such as lack of labor and slow delivery of material, the work was going ahead favorably. A great deal of attention was being paid to the improvement of the road-bed along the main line and branches.

A contract has been let to S. Brown, Winnipeg, for the erection of a blacksmiths' shop, car repairing shop and planing mill, and other work in the C.N.R. yards at Fort Rouge. The round-house, which the company is erecting itself, is nearly completed.

Construction work on the Brandon-Regina line reached the C.P.R. branch running from Kenway to Souris, Man., June 5, and was suspended pending the obtaining of authority to lay a crossing. Contractor O'Keefe is constructing the line from south of Balgonie to Regina, Sask. Contractor Cowan is working on the line from Scarth towards the C.P.R. Kenway-Souris branch.

Michigan Central Railroad.

The report of the directors for the year ended Dec. 30, 1906, covers the operation of the following mileage: main lines, 270.07 miles; proprietary lines, 343.93 miles; leased lines, 1,117.34 miles; lines operated under trackage rights, 14 miles; total, 1,745.34 miles. Of these lines 380.04 miles are in Canada, and comprise the Canada Southern Ry., 226.18 miles (on which there are 213.73 miles of second track, and 141.03 miles of sidings), and 153.86 miles of branch lines of the Canada Southern Ry.

On Jan. 2, 1906, the M.C.R. leased direct the property of the Toledo, Canada Southern and Detroit Ry. Co., one of the railroads of the Canada Southern Ry. System, included in the agreement of Aug. 15, 1903, for the period of its corporate existence. Under the terms of the lease this company agrees to pay the principal and interest on $4,500,000.00 4% first mortgage bonds as they may be issued in accordance with its provisions. The date of maturity of these bonds is 50 years from Jan. 1, 1906, and the amount now outstanding is $3,100,000.00. Of this, $1,500,000.00 is held by the C.S. Ry. Co., in accordance with the terms of the lease, and will not draw interest while in its possession. The interest on the balance of the outstanding $1,600,000.00 of bonds is paid by the M.C.R. Co. Under the terms of the lease, in consideration of the M.C.R. guaranteeing both principal and interest of the $4,500,000.00 bond issue, the C.S. Ry. Co. is to deliver to the M.C. Ry. Co. on Mar. 1, 1913, the $1,500,000.00 bonds held by that company and the entire capital stock of the T.C.S. & D.R. Co. On Dec. 27, 1906, the M.C.R. Co. acquire a majority of the capital stock of the Chicago, Kalamazoo & Saginaw Ry. Co., the road of which extends from Pavilion to Woodbury, Mich., 55.30 miles, passing through Kalamazoo. On April 9, 1906, the M.C.R. Co. acquired 30,000 shares of the common stock, and on Sept. 26, 1906, purchased $3,000,000.00 4% first mortgage bonds of the Chicago, Indiana and Southern Rd. Co. On Sept. 25, 1906, articles of association of the St. Clair & Western Rd. Co., succeeding the Michigan Midland & Canada Rd. Co., a proprietary line of the C.S.Ry. Co., were filed.

Cost of road and equipment to Dec. 31, 1905, was	$35,363,838.08
Less—	
Premium received on M.C. Rd. 3½% gold bonds of 1952, credited to construction account	150,580.99
Total cost of road and equipment to Dec. 31, 1906	$35,213,257.09
This represents per mile owned (270.07) miles) $130,386	
Terminal Railroad, Chicago (Indiana Harbor Line), construction account was increased	$98,260.43

The gross earnings were $26,275,588.13, an increase of $2,991,719.89 over the previous year. The freight earnings were $18,650,229.56, an increase of $2,394,748.67. This was due to an increased movement in nearly all commodities and in the average distance of each ton carried. The passenger earnings were $5,928,874.02, an increase of $703,345.76, due to a general increase in both local and interline business. The express earnings were $901,415.00, a decrease of $71,870.19. The expenses of operation were $21,730,263.99, an increase of $2,864,347.56. Maintenance of way and structures showed an increase of $70,448.76. Maintenance of equipment increased $1,155,651.36, due to renewal charges on account of cars and locomotives. Conducting transportation increased $1,622,906.24. The net earnings were $4,545,324.14, an increase of $127,372.33. Other income was $402,003.85, an increase of $86,191.69, due to increased revenue from securities and interest on advances. First charges, $3,959,500.47, increased $199,190.22, the principal items being interest on additional bonds issued, and interest on loans. The profit from operation for the year, after payment of 5% in dividends upon the capital stock, was $50,927.52, which has been carried to the credit of income account.

Liverpool and Milton Railway.

By an act passed last session of the Nova Scotia Legislature, the L. and M. Ry. Co. was authorized to sell its line to the Halifax and South-Western Ry. Co., and for the purpose of aiding in the purchase the Government was authorized to advance to the latter company a sum not exceeding $13,500 a mile in cash, or provincial debentures or stock issued under the provisions of Chap. 15 of the Revised Statutes, bearing interest at 3½%. Upon the transfer of the line it is to become part of the H. and S.W. Ry., and subject to the mortgage held by the Government dated Aug. 20, 1901, and it shall also become subject to the existing legislation affecting the H. and S.W. Ry.

The L. and M. Ry. was constructed under an act of the Province of Nova Scotia, and extends from Liverpool to Milton, a distance of 5.50 miles. This mileage, together with half a mile of siding, is laid with 56 lb. steel. It owns 1 locomotive, 1 box car, 11 platform cars, 1 conductor's van and 1 snow plow. Its operations for the year ended June 30, 1906, showed: Passenger earnings, $1,036.52; freight earnings, $5,602.90; total, $6,639.42; operating expenses, $5,554.30; net earnings, $1,085.12. Total train and engine mileage, 7,400; passengers carried, 20,460; freight carried, 16,535 tons. The general financial statement showed: Share capital, authorized, $49,000; subscribed and paid up, $30,300; bonded debt, $25,000, of which $5,000 at 6% interest had been issued and sold. Capital from other sources, $24,000; total capital, $59,300; floating debt, $24,000 at 6%. Cost of railway, $59,900.

The Manual of Statistics, issued by the Manual of Statistics Publishing Co., New York, has reached the 29th year of its issue. The volume runs to 1064 pages, and gives in concise form a mass of information relating to railways, industrial companies, government securities, mining stocks, grain and cotton stocks, which are required by investors, speculators and stock market interests. The arrangement of the facts and the mass of detail given shows the care taken in collecting and arranging the information available. The tables showing the movement of the different stocks at representative exchanges in the U.S. and Canada, are especially valuable to the investor.

The C.P.R. new transcontinental train, which will be put on July 2, will be named Trans-Canada, Limited. It will leave Montreal at 12.30 p.m., and will run on an 85 hour schedule to Vancouver, B.C.

The Empire Coal and Tramway Co. asked its shareholders at a special meeting held at Moncton, N.B., June 28, to increase the number of its directors from three to five. W. B. Chandler, Moncton, is Secretary-Treasurer.

Eight "friendly suits" have been filed in the U.S. District Court at St. Paul, Minn., against the Great Northern Ry., the Northern Pacific Ry., the Chicago, Milwaukee and St. Paul Rd., the Chicago and Northwestern Rd., the Chicago, St. Paul, Minneapolis and Omaha Rd., the Minneapolis and St. Louis Rd., the Chicago Great Western Rd., and the Minneapolis, St. Paul and Sault Ste. Marie Ry., to enjoin them from putting into effect the commodity rate recently ordered by the Minnesota Railroad and Warehouse Commission.

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PRESIDENT

Traymore Hotel Company
CHAS. O. MARQUETTE - MANAGER

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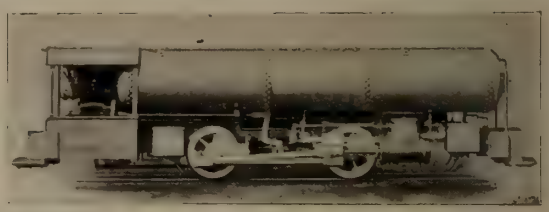

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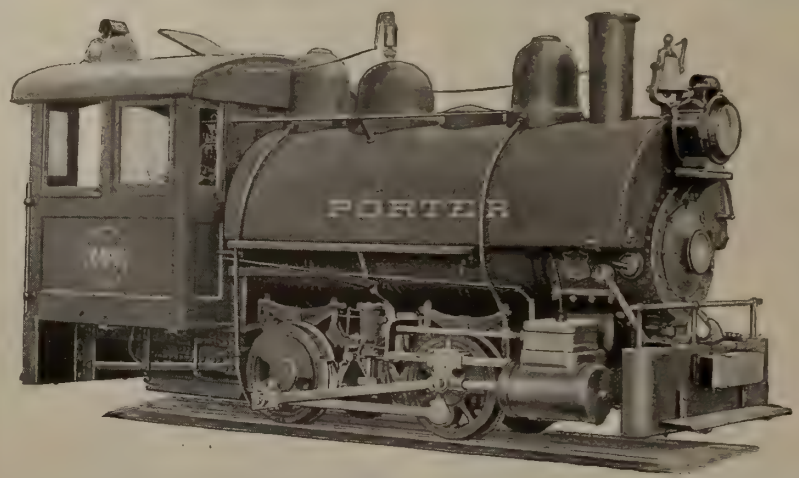

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LOGGING, MINE AND INDUSTRIAL LOCOMOTIVES.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Canadian General Electric Co. has issued a descriptive catalogue of alternating current ceiling fans, which it is putting on the market.

The Dominion Bridge Co. has been granted supplementary letters patent whereby its capital has been increased from $1,000,000 to $2,000,000.

The Canadian Oil Co., Toronto, has been authorized to do business in the Province of Quebec, its principal agents being Ryan and Bickerdike, Montreal.

The McConway & Torley Co., Pittsburg, Pa., have issued a catalogue descriptive of twentieth century developments in passenger service equipment, including steel passenger cars, Buhoup 3-stem couplers and Buhoup vestibules.

J. E. Ward, Vice-President and General Manager Gold Car Heating and Lighting Co., New York, has retired from the position of General Manager of that company, and will engage in business as a manufacturer and dealer in railway, steamship and contractors' supplies on his own account.

The Canadian Pilling Co. has been organized to build and sell compressed air and electrical applications of all descriptions, principally portable and stationary hoists, turntable tractors, winches, cranes and drills. President, J. L. Pilling; Vice-President, Jno. Taylor; General Manager, T. Arnold. Offices, 180 St. James St., Montreal.

The Dominion Bridge Co. has been granted supplementary letters patent under the Dominion Companies' Act, authorizing it to acquire, by purchase or otherwise, the property and good-will, etc., of other similar companies or firms; to hold shares in corporations of a similar nature; to form a union or working agreement with any steel company; to acquire or own such motive power as may be necessary for its business, and to sell any surplus power; to carry on any business germane to the objects for which the company is incorporated; to sell, lease or otherwise dispose, in whole or in part, of the company's property or assets; to act as agent for any corporation or individual; and to do all such other things as may be deemed necessary or useful in the attainment of the above objects.

The American Locomotive Co. has issued a pamphlet illustrating and describing different designs of 8-wheel or American type passenger locomotives. This is the eighth of the series of pamphlets which is being issued by this company to cover the various standard types of locomotives. It contains illustrations of 25 different designs of 8-wheel type locomotives, the principal dimensions of each design being given on the page opposite the illustration. The pamphlet constitutes a very complete record of the production of the company in this type of engine, and the arrangement is very convenient for the selection of a design best suited to meet the particular requirements.

The Robb Engineering Co., Amherst, N.S., has received the following orders recently: N. and M. Smith, Halifax, N.S., one 80 h.p. Robb-Armstrong engine; Columbia River Lumber Co., Golden, B.C., one 125 h.p. Robb-Armstrong engine; Temiskaming and Northern Ontario Ry., one 80 h.p. Robb-Armstrong engine; Canadian Pacific Ry., one 80 h.p. Robb-Armstrong engine; Canadian Westinghouse Co., one 100 h.p. Robb-Armstrong engine; Somerville, Ltd., Toronto, one 200 h.p. Robb-Armstrong Corliss engine, two 100 h.p. return tubular boilers, one 200 h.p. feed water heater, 1 duplex boiler feed pump; W. P. McNeil & Co., New Glasgow, N.S., one 150 h.p. Robb-Mumford boiler; Montreal General Hospital, two 150 h.p. return tubular boilers; Canadian Hand Drill Co., Sherbrooke, Que., one Robb-Armstrong tandem compound engine; Chambers Electric Co., Truro, N.S., one Robb-Armstrong vertical cross compound engine.

A paper was read at the recent convention of Master Boiler Builders at Cleveland, Ohio, on "Hydrostatic Tests of Boilers," by T. W. Lowe, of the C.P.R.

It is reported that it has been decided to refer to the Intercolonial Ry. in future as the "I.R.C." instead of the "I.C.R." The new initials stand for Intercolonial Ry. Canada, while the old ones stood for Inter-Colonial Ry. It has been claimed that the old initials brought about confusion with the Illinois Central Rd.

The Canadian Northern Quebec Ry., and its connecting line the Quebec and Lake St. John Ry., inaugurated a service between Montreal and the Saguenay, via Riviere à Pierre Jct., June 16. The new train leaves Montreal at 8.30 a.m., Roberval being reached at 6.55 p.m., and Chicoutimi at 10.35. A train is also run from Riviere à Pierre to Quebec, reaching that point at 4.45 p.m. The train to Montreal leaves Chicoutimi 5.45 a.m.; Roberval, 7.10 a.m., and reaches Montreal 5.45 p.m.

The Caledonia Springs Co. has been incorporated under the Dominion Companies' Act, with a capital of $200,000 and offices at Montreal, to acquire by lease, purchase or otherwise from the C.P.R., or as much as may be necessary, the Caledonia Springs property, and to carry on the business of bottling and selling the mineral waters of the springs, together with various incidental powers. The provisional directors are: Hon. L. J. Forget; C. R. Hosmer, A. D. MacTier, W. R. Baker, S. W. Beatty, Montreal, all of whom are C.P.R. directors or officials.

The Portage la Prairie Construction Co. has been incorporated under the Manitoba Companies' Act, with a capital of $100,000 and offices at Portage la Prairie, Man., for the purpose of carrying on a general contracting business, including bridges, telegraph and telephone lines, railways and tramways, including any and every branch of work involved in railway or tramway construction; to deal in contractors' supplies, and to purchase or otherwise acquire stocks, bonds, or other securities of any other corporation. The provisional directors are: G. B. Housser, W. Armstrong, W. Richardson, M. A. Ferris, H. Armstrong, A. L. Hamilton, and P. Whimster, Portage la Prairie.

The Chicago Transportation Association, consisting of the travelling, contracting and soliciting freight and passenger agents having headquarters in Chicago, has been reorganized and the following officers have been elected for the current year: President, T. M. Cunerty, Erie Rd.; Vice-President, A. S. Hindman, Michigan Central Rd.; Secretary, C. R. Boak, Intercolonial Ry.; Treasurer, G. H. Brown, Grand Trunk Ry. The meetings are held on the second Monday of each month with the exception of July and August. On June 15 a tally-ho party, and trip to one of Chicago's popular pleasure resorts was held under the auspices of the Association. This is the first of a number of enjoyable times which the entertainment committee has planned for the summer.

Railway Rolling Stock Notes.

The Anglo-Newfoundland Development Co. has ordered a locomotive in the U.S.

The Canadian Northern Ry. has ordered two switching locomotives from the American Locomotive Co.

The Central Ontario Ry. has placed an order for one first-class passenger car with the Crossen Car Manufacturing Co., Cobourg, Ont.

The Grand Trunk Pacific Ry. has placed an order for 20 construction cars for its engineering and telegraph departments with the Canada Car Co., Montreal.

The Canadian Northern Ry. received between May 13 and June 13 seven passenger cars and 100 flat cars from the Crossen Car Manufacturing Co., Cobourg, Ont.

The Prince Edward Island Ry. is having constructed, at its Charlottetown shops, a combined first-class passenger and smoking car, a number of freight cars and a snow plow.

The C.P.R. between May 15 and June 12 placed orders for 10 switching locomotives, 1 standard wing snow plow and 1 double-track snow plow at its Angus, Montreal, shops.

The Canada Car Co., Montreal, is building 20 Hart convertible ballast cars for the Dominion Dump Car Co., Montreal. They are of the same general dimensions as those described in our issue of Sept., 1906, as having been ordered for the G.T. Pacific Ry.

The C.P.R. has ordered at its Angus, Montreal, shops, 10 switching locomotives of the six-wheeled coupled type, class U. 3c, with cylinders 18 and 26 ins., 52 in. driving wheels, and weighing 126,000 lbs. each. These are duplicates of those built in 1905 and 1906 which were fully described by us at that time.

The general dimensions of the baggage and express cars and baggage cars under construction at the C.P.R. Angus, Montreal, shops, are similar to those described in our Sept. issue, 1906; the dimensions of the baggage and smoking cars under construction at the same shops are similar to those described in our Nov. issue, 1906, and the vans are similar to those described in our last issue.

The Intercolonial Ry. has placed an order with the Canada Car Co., Montreal, for 34 double-deck stock cars. The specifications provide: Length over end sills, 36 ft.; width over side sills, 9 ft.; height inside, 8 ft.; door opening, 4 ft.; wheel base of trucks, 5 ft. 2 in.; Simplex bolsters and brake beams; Susemihl roller side bearings; cast iron journal boxes, 4¼ by 8in. journals with malleable iron lids and wedges; 33 in. cast iron wheels, 650 lbs. weight.

The C.P.R. between May 15 and June 12 received the following rolling stock: 6 freight locomotives from the American Locomotive Co.'s Richmond, Va., works; 10 freight locomotives from another U. S. firm; 1 freight locomotive from the Locomotive and Machine Co. of Montreal; 5 Pacific type passenger locomotives, 11 dining cars, 5 sleeping cars, 5 first-class cars, 137 box cars, 67 flat cars, 44 steel coal cars and 165 Hart convertible ballast cars, from its Angus, Montreal, shops.

The Canadian Northern Ry. between May 15 and June 15 received the following rolling stock: seven 10-wheel locomotives from the Canadian Locomotive Co., Kingston, Ont.; eight 10-wheel locomotives from the Locomotive and Machine Co. of Montreal; 225 box cars, 1 mail and express car, and 4 baggage cars from Rhodes, Curry & Co., Amherst, N.S., 2 stock cars, 25 flat cars and 8 second-class cars from the Crossen Car Manufacturing Co., Cobourg, Ont.; 100 Hart convertible cars from the Canada Car Co., Montreal.

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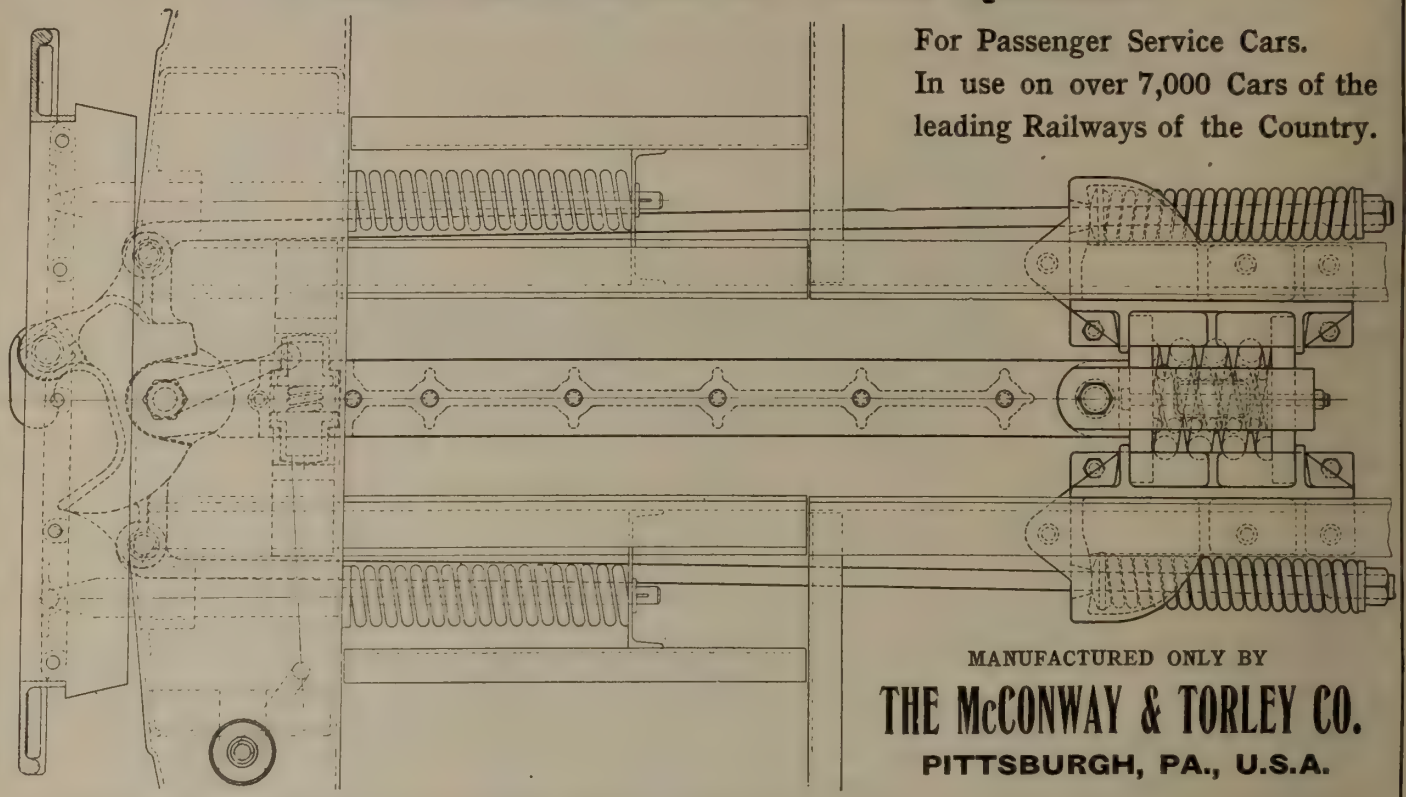

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Railway Finance, Meetings, etc.

Atlantic and Lake Superior Ry.—An order was made June 10 by the Exchequer Court confirming the scheme of arrangement filed in March, and amended in some details by the court. In pursuance of the scheme of arrangement the bondholders of the Baie des Chaleurs Ry.—one of the companies amalgamated to form the A. and L.S. Ry.—are invited to transfer and deliver to the Royal Trust Co., Montreal, up to July 15, the bonds held by them. Bonds not so transferred are barred from the benefits of the special trust fund, and the holders of the same will rank as ordinary unsecured creditors. A special general meeting of the shareholders of the B. d C. Ry. Co. was called to be held in Montreal, June 15, for the purpose of declaring the forfeiture of the shares belonging to those shareholders who have made default in the payment of any call payable by them for the space of two months after the time appointed for the pavment thereof, and of authorizing the directors to sell the shares so forfeited either at public auction or by private sale.

Baie des Chaleurs Ry.—See Atlantic and Lake Superior Ry.

Canada Coal and Rd. Co.—See Maritime Coal, Ry. and Power Co.

Canada Southern Ry.—The annual meeting was held at St. Thomas, Ont., June 5. No separate report is issued for the C.S.R. Co., it being leased in perpetuity to the Michigan Central Rd. Following are the directors for the current year: W. K. and F. W. Vanderbilt; H. McK. Twombly, W. H. Newman, C. M. Depew, S. F. Barger, H. B. Ledyard, E. A. Wickes, J. E. Brown. These are also the directors of the different subsidiary companies.

Intercolonial Ry.—For the nine months ended Mar. 31, the accounts show a surplus of receipts over expenditures of $218,000, and the estimates of officials is that the surplus of receipts over expenditures for the year ended June 30 will reach $400,000.

London and Port Stanley Ry.—The City Auditor presented a report to the London, Ont., City Council, June 10, of an audit of the Pere Marquette Rd. books, showing the L. and P.S. Ry. earnings. The total earnings for the year ended Dec. 31, 1906, were $143,-736.06 against $131,056.24 for 1905. The city is entitled to 10% upon all income over $80,000, but as in 1905 owing to an error the city was paid this percentage on $35,493.23 of earnings to which it was not entitled, it will only receive 10% on $28,901.24 for 1906.

Lotbiniere and Megantic Ry.—An act passed at the recent session of the Quebec Legislature gives the company power to sell or lease its line to any other company. In the act incorporating the Quebec Eastern Ry. Co., a section specially authorizes the L. and M.R. Co. to sell its line to that company.

Maritime Coal, Ry. and Power Co.—At a meeting of shareholders in Montreal, May 29, a resolution was passed ratifying the purchase of the property and undertaking of the Canada Coal and Rd. Co. By this purchase the M.C.R. and P. Co. becomes the owner of an additional area of over 17 square miles of coal-bearing lands, together with 12 miles of railway, terminal facilities and rolling stock. The railway extends from Maccan, N.S., through the coal lands to the coal docks on the Bay of Fundy. Possession of the property was taken June 1, and the new owners propose to open up some new mining areas and to pursue an aggressive policy of development. Senator Mitchell is President of the company.

The Canada Coal and Rd. Co. was incorporated under the Nova Scotia Companies' Act, with a capital of $600,000 in common and preferred stock, of which $300,000 of common stock had been issued, and $150,000 of the $300,000 of preferred stock. The company took over the Joggins Ry., which was constructed under the authority of an act of the Nova Scotia Legislature passed in 1883. The railway is 12 miles long and there are 3.50 miles of sidings—all of which are laid with 56-lb. steel rails. At June 30, 1906, its rolling stock consisted of two locomotives, one first-class car, one second-class car, two baggage, mail and express cars; five platform cars, and one snow plow. During the year the train mileage was 22,450, and the engine mileage, 29,768 miles; 11,328 passengers, and 102,245 tons of freight (97,202 tons being coal) were carried. The total earnings were $43,080.46, and net earnings $12,428.72. The general statement shows that $300,000 of the common stock had been subscribed and paid up; $61,000 had been paid up on the $150,000 preferred stock issued; there had been received $37,500 by way of subsidy from the Dominion Government, and $35,200 from the Nova Scotia Government. The cost of the railway and equipment is given as $168,-061.25, and at June 30, 1906, there was a floating debt of $478.14.

Montreal, Ottawa and Occidental Ry.—At the last session of the Quebec Legislature, a vote of $750 was made towards the payment of one year's interest to June 30, 1908, at 3%, on $25,000 purchase price of the fuel yard at Quebec, acquired for M., O. and O. R.

Pere Marquette Rd.—The plans for the discharge of the receivership, which have been under consideration for some time, are understood to have been finally agreed upon. The P.M. stockholders, in order to put an end to the receivership, have expressed themselves as willing to subscribe $5,000,000 cash for new P.M. preferred stock at par. The money thus received would be sufficient to pay off all obligations including those incurred since the appointment of the receiver, and to give the road a fair amount of working capital. The present preferred stockholders, who subscribed for the new preferred stock at par, are understood to have agreed also that there shall be no obligation to pay dividends upon this additional issue until the expiration of a certain number of years, and that thereafter the dividend shall be cumulative.

Phillipsburg Ry. and Quarry Co.—By an act passed last session of the Quebec Legislature the outstanding stock of the company, amounting to $124,500, is declared to have been validly issued and paid up; the company is authorized to sell its undertaking or any part of it to any other company, and the stock or bonds received for the sale distributed among the directors and shareholders; it is also given power to change its name to that of the Phillipsburg Ry. Co.

Temiskaming and Northern Ontario Ry.—The Attorney-General of Ontario has granted the necessary fiat to enable Coates Sons & Co., financial agents, London, Eng., to bring an action against the Province to recover £3,000 in connection with the flotation of a loan of £1,200,000 to meet Treasury bills issued in connection with the construction of the T. and N.O. Ry. Coates & Co. claim that the late Provincial Government entered into an agreement by which that firm would negotiate financial matters in respect of the railway upon the London market, but the present Government repudiates any such contract.

The net receipts for the three months ended Mar. 31, are reported to be $40,563, against $38,364 for same period, 1906.

Toronto, Hamilton and Buffalo Ry.—The annual meeting was held at Hamilton, Ont., June 5, when general routine business was transacted. The company does not issue a report. The railway is owned by the New York Central and Hudson River Rd. and the C.P.R. The officers and directors for the current year are: W. H. Vanderbilt, W. H. Newman, C. F. Cox, New York; H. B. Ledyard, Detroit, Mich.; J. N. Beckley, Rochester, N.Y.; Sir T. G. Shaughnessy, D. McNicoll, Montreal; E. B. Osler, N. Kingsmill, W. P. Torrance, Toronto; D'Arcy Scott, Ottawa.

Earnings for May, $91,418.45, against $57,789.53 for May, 1906.

Wabash Rd.—A refunding and extension mortgage for $200,000,000, in favor of the Bowling Green Trust Co., J. C. Von Blaircom and Jas. B. Forgan, has been filed at Detroit. It will run for 50 years at 4%, and is to cover an issue of bonds to be issued in denominations of $1,000. Holders of old securities are permitted to exchange their holdings for an equivalent in the new mortgage bonds. The present indebtedness to be taken up is $89,000,000 and the remainder of the issue is to be devoted to extensions and improvements of the system

G.T.R. Betterments, Construction, Etc.

Port Hope Viaduct.—In connection with the recent investigation by the Board of Railway Commissioners into the application of the G.T.R. respecting the viaduct at Port Hope, Ont., the judgment of the Board is that the viaduct should not be filled in between the east side of Mill St. and the west side of elevated tracks, and that full width openings should be left for King St. and John St. The formal order had not been issued June 12.

Toronto Eastern Entrance Plans.—It has been decided by the Dominion Department of Justice, that the application of the G.T.R. for approval of its route map for a new eastern entrance into Toronto does not come within the jurisdiction of the Minister of Railways, according to Sec. 167 of the Railway Act. This decision does not set forth that the application has to come before the Board of Railway Commissioners. The procedure in a case like the present, where a railway desires to change the location of its completed line, appears to have been left in a doubtful state by the various amendments made to the act.

Stratford Shop Extension.—C. M. Hays wrote recently to the Mayor of Stratford, Ont., stating that a contract had been let to the Canadian Bridge Co., Walkerville, Ont., for the furnishing and erection of the structural steel work for the additions to the company's shops at Stratford. The work should be completed within eight months. The present boiler erecting and machine shop will be done away with and an entire new steel and cement structure erected. The new building will be 950 ft. long and run from the street line of Nelson St. eastward. The shops will be 175 ft. wide, 53 ft. wider than the present structure. One large 120-ton electric crane will be installed to enable the largest locomotive to be lifted up bodily and carried from one end of the shop to the other. Smaller electric cranes will also be installed for handling lighter work throughout the shops. The new additions will be 20 ft. higher and 72 ft. wider than the present large tender shop which was erected two years ago. The total length of the new shops will be 950 ft., and will include boiler, erecting and machine departments. Eventually, 750 ft. of the old shops will be removed to make way for the new structure.

Hyde Park, London, Ont.—The extensive work of cutting through Hyde Park hill, west of London, Ont., which has been in progress for about a year, is expected to be completed by the end of the summer. The hill has been cut down about 70 ft. at its summit, and room has been provided for the laying of four tracks. This work has been done in connection with the bridge recently completed at the Cove, and represents an expenditure of about $1,000,000.

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A Central Vermont Ry. Decision.

The Vermont Board of Railroad Commissioners has rendered a decision in the case of the petition of the residents of Milton, Vt., vs. the Central Vermont Ry. Co., to make Milton, a town of about 1,800 population, a flag station for the New England States Limited, a through passenger train from Montreal to Boston and New York, especially devoted to carrying interstate and international passengers. It was shown in evidence that the schedule time of this train from St. Johns to White River Jct., a distance of 163 miles and the C.V.R. portion of its trip, is 4 hours and 35 minutes. The train now makes 10 stops between St. Johns and White River Jct., including one of seven minutes at St. Albans, and has heavy transfers at Essex and Montpelier Junctions. The time necessarily consumed in making these stops is between 35 and 45 minutes. Assuming that the stops can be made in 35 minutes, the running time of this train from St. Johns to White River Jct. must be 41 miles per hour in order to make the schedule time. In order to accommodate the passengers bound for Boston, connection must be made with the Boston and Maine Rd. at White River Jct. and also at Bellows Falls upon the Fitchburg division of that road; and in order to accommodate passengers for New York, connection must be made with the Rutland Rd. at Burlington, and with the New York, New Haven and Hartford Rd. at Springfield by the way of the Boston and Maine and Central Vermont train which is made up at White River Jct. for Springfield.

That part of no. 2, the Montreal train which is destined for Springfield, is made up at Montreal with a day coach and a Pullman car which, on arriving at White River Jct., are taken by the Boston and Maine train that goes over the Connecticut and Passumpsic division of that road, and is attached at White River Jct. to a train for Springfield. If the Boston and Maine train over the Connecticut and Passumpsic division of that road is delayed by the late arrival of no. 2, the passengers over the Connecticut and Passumpsic division and the passengers over the Central Vermont lose their connection at Springfield for New York. This train is the only day train over the Boston and Maine Rd. for New York by way of Springfield, is a very heavy train, and in summer consists of a number of drawing-room cars in addition to its day coaches. The Boston and Maine Rd. objects to any delay at White River Jct. which endangers their passengers reaching New York by the afternoon express by way of Springfield, which reaches New York at 9.30 p.m. The connection at Springfield is close, and the New York, New Haven and Hartford Rd. refuses to make any delay for the Boston and Maine and Central Vermont passengers. If they fail to make connection, there is only a local train which takes them to New York at 11 p.m.

No. 2 makes close connection with the Rutland Rd. at Burlington, arriving there at 11.52, the Rutland train leaving at 11.55, and the Rutland refuses to delay its train, which is a New York train, for more than five minutes; and delay on the part of no. 2 endangers the connection at Burlington for all passengers west of Montreal bound for New York by way of the Rutland Rd. and the New York Central. No. 2, under a contract with the U.S. Government, carries sealed mail pouches from Montreal to St. Albans; and at St. Albans a U.S. mail car is attached, and the train is run as a regular mail train from St. Albans to Springfield. During the summer of 1900 and continuously from the summer of 1901 until Dec. 23, 1906, Milton was a flag station for no. 2. While Milton was thus a flag station, the Central Vermont Ry. had great difficulty and often failed in making the connections above indicated, and to obviate the difficulty, on Dec. 23, 1906, they discontinued stopping no. 2 at Stanbridge and St. Armand, Que., and at Milton and Richmond, Vt. The time thus gained has since enabled the C.V.R. to better ensure making the above connections. Through no. 2, the C.V.R. is in sharp competition with the C.P.R. and the Boston and Maine Rd. with the Rutland Rd. and the Delaware and Hudson Co., which leaves Montreal over the G.T.R., for the through passenger traffic from Montreal to New York and Boston.

The opinion of the Board of Railroad Commissioners is as follows: "We think that the C.V.R. Co. has fully performed its duty toward the town of Milton and vicinity, in the way of furnishing it proper and adequate accommodation, without stopping this interstate and international train as the petitioners desire. The limited train has come to keep pace with the competitive demand for speed. Trains could not be such in name or fact if compelled to stop at the smaller stations. Slight local inconvenience must, in many instances, yield to the superior rights of through traffic. This matter cannot be viewed alone in the light of ordering this train to stop at Milton, which might not require more than three minutes. As was said by the U.S. Supreme Court in Mississippi Railroad Commission vs. Illinois Central Rd. Co.: 'It is the question whether these trains can be stopped at all at any particular station when proper and adequate facilities are otherwise afforded at such station. If the commission can order such a train to be stopped at a particular locality under such circumstances, then it could do so as to other localities, and in that way the usefulness of a through train would be ruined and the train turned from a through to a local one. . . . . The legislature of a State could not itself make such an order, and it cannot delegate the power to a commission to do so, in its discretion, when adequate facilities are otherwise furnished. The transportation of passengers on interstate trains as rapidly as can with safety be done is the inexorable demand of the public who use such trains. Competition between great trunk lines is fierce and at times bitter. Each line must do its best even to obtain its fair share of the transportation between States, both of passengers and freight. A wholly unnecessary, even though a small obstacle, ought not in fairness to be placed in the way of an interstate road, which may thus be unable to meet the competition of its rivals.'

"The petitioners claimed, and the evidence tended to show, that in spite of the time saved by not stopping at Milton and other like stations, no. 2 continued to miss connections at White River Jct. and other points. To the Board this evidence would seem to indicate, not an argument for reinstating Milton as a flag station, but rather a reason for discontinuing stopping at this and other like stations, as the company has already done."—Railway World.

It is proposed to establish a chair of engineering at the University of Manitoba, and a stipend of $2,500 is being offered for a professor.

In reference to the question of accidents on Canadian railways arising from defective rails some special investigations have been made by officers of the Board of Railway Commissioners, but we were informed June 12, that no report had been submitted to the board, and until this was done no general consideration would be given to the matter. No circular, we were informed, had been issued to the railway companies on the subject.

Air Brake Association.

At the annual convention of this association at Cleveland, Ohio, recently, a paper was presented by W. C. Hunter, Manager New Brunswick Coal and Ry. Co., on "Maintenance of Air Brakes under Freight Cars and a System of Keeping Check of Repairs."

There being some 2,000,000 freight cars in the United States and Canada equipped with air brakes, representing an investment of approximately $60,000,000, the committee believes that their maintenance in efficient condition is an important subject, not only because inefficient air brakes fail to earn a fair return on their cost as a train stopping mechanism, but from the fact that brakes in bad order cause loss and damage to lading, and to rolling stock, the aggregate cost of which is an incalculably large sum. It follows, however, that a very necessary feature of the work of maintenance is a well-defined system of keeping check of all air brake repairs, and also of the general condition of the brakes. The paper describes how one important Canadian railway does air brake repair work, the manner of recording the work done and the general condition of its freight car air brakes. Reference is made to the system of keeping record of these general repairs, by which data are at hand to quickly ascertain when any car on the railway had its brake overhauled, the nature of repairs and when it is due to again be overhauled. With the use of such a system a record is always available, showing how many freight car air brakes are in operation on the road each day, the number in good order, how many are in bad order or cut out, on what part of the line the most trouble occurs with brakes and what it consists of. Other forms of defect cards are described and while these apparently somewhat complex systems require additional clerical help, stationery, etc., the committee has no doubts that it pays. Considerable discussion followed the paper, the sentiment varying not a little as to the best form of card for general use, and the subject was closed with the understanding that it be carefully considered and again brought up at the next convention.

Mr. Hunter was elected Second Vice-President, and W. J. Hatch, of the C.P.R., a member of the Executive Committee for the current year.

The corner-stone of the transportation building, which the C.P.R., the G.T.R. and the Canadian Northern Ry. are erecting on the exhibition grounds, Toronto, was laid June 4, by the Premier of Ontario.

The Western Canada Immigration Association has received a grant of $5,000 from the G.T.R. in furtherance of its programme of advertising Canada. H. R. Charlton, of the G.T.R. advertising department, has been elected a member of the executive committee.

A charge laid under the Lord's Day Act against the G.T.R. the company's yardmaster at East York, and a fireman employed at the yard there, is being investigated by one of the magistrates for York County. The specific charge is for carrying on their usual avocation on a certain specified Sunday in April, and the proceedings are instituted under the authority of the Attorney-General of Ontario.

The Stratford Rapid Transfer Co. is being organized in Stratford, Ont., with a capital of $40,000, to conduct an automobile passenger and delivery system. Following are the provisional officers: President, E. K. Barnsdale; Vice-President, F. J. Corrie; Managing Director, J. S. Smith; Secretary, E. A. Rea; Treasurer, Dr. Forester. The company expects to have its motors on the streets early in July, and will give a 5c. fare, six tickets for 25c., with one transfer.

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MAINLY ABOUT PEOPLE.

F. White, C.E., Montreal, died there May 27, after a short illness.

J. P. Dawes, Montreal, a director of the Dominion Bridge Co., died there June 12.

B. J. Coghlin, of B. J. Coghlin & Co., has left Montreal for his annual trip to England and Ireland.

R. B. Angus, director C.P.R., and Mrs. Angus, Montreal, celebrated their golden wedding June 13.

Jas. T. Barnes, assistant chief train dispatcher, C.P.R., Brandon, Man., died there suddenly, May 23.

G. A. Walton, C.P.R. station ticket agent, Winnipeg, was married there, May 25, to Miss E. M. Macdonald.

W. Nicol, a former G.T.R. station agent at Brantford, Ont., has been appointed postmaster at Regina, Sask.

H. Newnham, of the C.P.R. General Freight Department, Montreal, was married at St. John, N.B., June 4, to Miss F. A. Kay.

A. MacArthur, President of MacArthur Bros. Co., railway contractors, Chicago, Ill., died at Riverside, Ill., June 2, aged 73.

A. R. Creelman, K.C., chief counsel C.P.R., and the Misses Creelman, sailed on the Empress of Ireland for England, June 14.

J. J. Hartnedy, assistant Superintendent Canadian Northern Ry. sleeping and dining cars at Edmonton, Alta., died there recently.

R. G. Reid, President Reid Newfoundland Co., is making a visit to Newfoundland, in connection with the company's undertakings there.

W. J. Crossen, of the Crossen Car Manufacturing Co., Cobourg, Ont., has been elected a director of the Cobourg Summer Horse Show.

M. A. Piggott, Hamilton, Ont., one of the contractors for the Guelph and Goderich Ry., is engaging in mining in the Cobalt district.

C. H. Dancer, Chief Engineer for the Manitoba Government, has been appointed Deputy Minister of Public Works and Chief Engineer.

T. P. Phelan, Toronto, President of the Canada Ry. News Co., has been elected President of the Ontario License-holders Protective Association.

Miss L. Forget, daughter of Hon. L. J. Forget, director C.P.R., was married at Ste. Anne de Bellevue June 13 to W. W. Skinner, Montreal.

Sir C. Rivers Wilson, President G.T.R., is expected at Montreal, early in July, for the purpose of making his annual trip of inspection over the line.

John Waldie, who died in Toronto June 12, was President of the Victoria Harbor Lumber Co., and interested in marine transportation on the Great Lakes.

The engagement is announced of Miss C. M. Cross, daughter of W. Cross, Assistant to the Second Vice-President C.P.R., Winnipeg, Man., to R. L. Dennison.

A Moncton, N.B., despatch says the engagement is announced of D. Pottinger, General Manager Government Railways, to Mrs. Read, widow of F. P. Read.

O. F. French, formerly General Manager of the Cuyahoga Telegraph Co. in Ohio, has been appointed Deputy Minister of Railways, Telephones and Telegraphs for Manitoba.

S. MacDougall has resigned his position as Manager of the Ottawa Branch of the Sovereign Bank to join the Eastern Construction Co., which is engaged in railway contracts.

Miss R. H. Wainwright, daughter of W. Wainwright, General Assistant and Comptroller G.T.R., was married at Montreal June 12, to A. R. Chipman, of St. Stephen, N.B.

E. L. Corbett was presented with a travelling bag, etc., by his fellow-clerks in the Intercolonial freight office at St. John, N.B., June 17, on his leaving to enter the C.P.R service.

Mrs. A. B. Foster, who died at Cowansville, Que., recently, was widow of the late Hon. A. B. Foster, of Waterloo, Que., well known as a railway promoter, contractor and financier.

A. W. Wheatley, heretofore Assistant Superintendent of Motive Power, Union Pacific Rd., has been appointed General Inspector American Locomotive Co., with office at Schenectady, N.Y.

L. V. Druce, Commercial Agent G.T.R., Seattle, Wash., is reported to be a grandson of the eccentric toy dealer of London, Eng., who it is claimed in certain circles was also the Duke of Portland.

C. E. Crowley formerly of the G.T.R. Engineering Staff at Toronto, and latterly with the Northern Ry. of Costa Rica, has been appointed Resident Engineer of that line with office at San Jose, C.R.

C. C. Malloch, of Ottawa, on the Georgian Bay Canal survey staff, was drowned at Mille Isles Rapids, Lake of Two Mountains, June 3, while on survey duty. He was in a launch when he was fouled by a cable and thrown into the water.

C. M. Hays, Second Vice-President and General Manager G.T.R., returned to Montreal, June 14, from Chicago, Ill., where he was attending the annual meetings of terminal and other companies in which the G.T.R. is interested.

A. J. Nixon was presented with an address and a diamond ring by the G.T.R. employes at Stratford, Ont., where he had been Trainmaster, on leaving June 4 to take up his new duties as Assistant Superintendent at London, Ont.

P. S. Archibald, C.E., Moncton, N.B., General Manager Elgin and Havelock Ry., has been appointed a member of the board of investigation in connection with the labor troubles at the Cumberland Ry. and Coal Co. mines, Springhill, N.S.

A Montreal dispatch of June 25 said that E. A. James, ex-Manager Canadian Northern Ry., had had an interview there with D. McNicoll, Vice-President C.P.R., and that it was rumored he might re-enter the latter company's service.

A. Moffatt, train despatcher Intercolonial Ry., Sydney, N.S., received injuries to his head from some falling timbers on board the steamboat Montcalm, June 9, while the vessel was transferring mails to the Allan Line S.S. Virginian at Sydney.

The King's birthday honors include the following: Knighthood, Nathaniel Dunlop, chairman of the Allan Steamship Line; Knight Bachelor, R. G. Reid, President Reid Newfoundland Co.; Victorian Order Knight Commander, Sir Thos. G. Shaughnessy.

U. E. Gillen was entertained at dinner by the representatives of the transportation interests in London, Ont., June 10, in connection with his recent promotion from Assistant Superintendent there to Superintendent Middle Division, Toronto.

J. H. Dougherty, for many years secretary to W. Wainwright, General Assistant and Comptroller, G.T.R., Montreal, was presented with a travelling bag by the office staff, May 31, on his leaving the company's service to engage in private business in Winnipeg.

J. A. Yorrick, Canadian Freight and Passenger Agent, Chicago, Burlington and Quincy Rd., Toronto, was presented with a cabinet of silver and an address by the representatives of the transportation companies in the city, June 11, on the occasion of his marriage.

Sir Thos. G. Shaughnessy, President C.P.R., arrived in Winnipeg, June 17, on a trip of inspection, and for the purpose of discussing matters connected with the extension of the western lines. He returned to Montreal via the Minneapolis, St. Paul and Sault Ste. Marie Ry.

E. N. Todd, Assistant Export and Import Freight Agent C.P.R., Toronto, was married there June 11 to Miss C. C. Benson. They went to the Pacific Coast for their honeymoon. The officials and staff of the C.P.R. Freight Department, Toronto, gave Mr. Todd a handsome present of cut glass.

H. Montgomery, who has been appointed Assistant Superintendent of Motive Power Bangor and Aroostook Rd., Milo, Me., is a native of London, Ont., and served his apprenticeship in the Canada Southern Ry. shops at St. Thomas, Ont. He was subsequently engaged on the Chicago, St. Paul, Minneapolis and Omaha Rd., the Chicago and Northwestern Rd., and the Central Rd. of New Jersey.

W. Borbidge, who has been appointed district master mechanic, C.P.R., Ottawa, was born at St. John's, Que., April 12, 1855, and entered railway service in 1872, since which his record has been: 1872 to 1874, brakesman, Brockville and Ottawa Ry., and Canada Central Ry.; 1874 to 1879, fireman and fitter in roundhouse, same roads; 1879 to 1898, locomotive engineer same roads and their successor, the C.P.R.; 1898 to May, 1907, road foreman of locomotives, C.P.R.

Lieut.-Governor Jas. Dunsmuir, of British Columbia, was on board his yacht Thistle, May 27, with a large party, returning to Victoria, when a fire broke out on board as the vessel was off Queen Charlotte Sound. The party got away in the boats and had travelled 32 miles before they were sighted by a southbound steamboat and picked up. They were landed at Vancouver. The vessel was burned to the water's edge, and the party and crew lost everything.

J. H. Mills, who has been appointed district master mechanic, C.P.R., at Montreal, was born at Sherbrooke, Que., April 23, 1865, and entered railway service as bridgeman, 1889, and in the following year became a fireman, since which his record has been: 1890 to Jan., 1897, fireman; Jan., 1897, to Jan., 1902, locomotive engineer; Jan., 1902, to April, 1904, appointed to general shops Montreal, to take charge and deliver new power; April, 1904, to May, 1907, road foreman of locomotives; entire service with C.P.R.

F. J. Balch, who has been appointed Assistant General Freight Agent, Ottawa and New York Ry., Ottawa, was born in Massena, N.Y., April 15, 1870, and entered railway service in 1888, having previously spent two years in telegraph service. His record is: 1888 to 1891, agent, operator and latterly as outside ticket agent at summer resorts in the Adirondacks for the Chateauguay Rd.; 1891 to 1898, division agent, Canada Atlantic Ry., Rouse's Point, N.Y.; 1898 to Dec., 1900, in charge of Canada Atlantic Ry. terminals at Swanton, Vt.; Dec., 1900, to Dec., 1901, clerk West Shore Rd., Weehawken, N.J.; Dec. 1901, to June, 1907, chief clerk in general freight office, Ottawa and New York Ry., Ottawa.

R. W. Rigg, who resigned his position as Contracting Freight Agent G.T.R. in Liverpool, Eng., to enter the West of England China Clay Co.'s service, was entertained at a farewell dinner in Liverpool recently, and presented with a silver tea and coffee service and an illuminated address, subscribed for by the G.T.R. traffic staff at Colonial House, Liverpool, and by Liverpool shippers, who were well represented at the dinner by some

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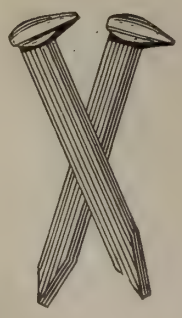
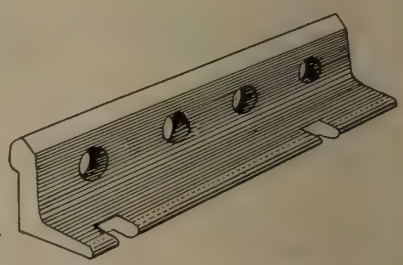


AXLES

CAR AND LOCOMOTIVE



Railway Angle Bars and Track Spikes

FORGINGS MARINE AND RAILROAD

Pig Iron, Iron and Steel Bars

of the best known men in the Canadian trade. Among those present were: F. C. Salter, G.T.R. European Traffic Agent, Liverpool; H. Cuthbertson, Agent Canadian Express Co.; J. Renton, Assistant Freight Agent G.T.R., and S. G. Tate, heretofore Freight Agent for the American Express Co. in Liverpool, and formerly of St. Thomas, Ont., who succeeds Mr. Rigg.

S. P. Howard, whose portrait appears on the first page of this issue, was born in Montreal, Dec. 30, 1866, and entered transportation service under the Montreal Harbor Commissioners, serving as clerk in the Wharfinger and Harbor Master's office and subsequently as private secretary to the chairman of the board. He entered the C.P.R. service Feb. 1, 1883, his record since being: 1883 to 1886, stenographer to General Freight Agent; 1886 to 1888, chief clerk Foreign Freight Department; 1888 to 1891, Travelling Freight Agent; 1891 to 1898, City Freight Agent, Montreal; 1898 to July, 1901, Assistant General Freight Agent; July, 1901, to present date, General Freight Agent, Eastern and Lake Superior Divisions, Montreal; entire railway service with the C.P.R. at Montreal. He is President of the Canadian Freight Association for the current year.

D. C. Coleman, who has been appointed Superintendent C.P.R., Nelson, B.C., was born at Carleton Place, July 9, 1879, and entered railway service 1899, his record being: Nov., 1899, to Jan., 1900, stenographer, Assistant Engineer's office, Fort William, Ont.; Jan., 1900, to July, 1900, Secretary to Superintendent at Fort William, Ont.; July, 1900, to Sept., 1900, Secretary to General Superintendent, Winnipeg; Sept., 1900, to Feb., 1901, Secretary to Superintendent, Fort William, Ont.; Feb., 1901, to Mar., 1901, Secretary to Superintendent, Cranbrook, B.C.; Mar., 1901, to May, 1902, chief clerk Superintendent's office, Cranbrook; June 1, 1902, to April, 1903, chief clerk General Superintendent's office, Lake Superior Division, North Bay, Ont.; April, 1903, to Feb., 1904, General Superintendent's acountant, Lake Superior Division, North Bay; Feb., 1904, to Mar., 1907, chief clerk General Superintendent's office, Central Division, Winnipeg; Mar., 1907, to June, 1907, chief clerk Assistant General Manager's office, Western Lines, Winnipeg; entire service with C.P.R.

It is proposed to provide offices for the Temiskaming and Northern Ontario Ry. Commissioners and the Ontario Railway and Municipal Board, in a wing which it is proposed to add to the Legislative Buildings in Queen's Park, Toronto.

Following are the officers and directors of the Lake St. Joseph Hotel Co.: President, B. Leonard; Vice-President, J. G. Scott; other directors: J. T. Ross, Hon. J. Tessier, Lieut.-Col. W. J. Ray, J. H. Holt, A. Pickard, W. H. Brown, A. E. Doucet, A. Hardy, G Lemoine; Secretary, L. G. Scott.

The Brotherhood of Locomotive Engineers held its annual convention in Quebec, June 18, and following days. The business sessions were private. The social gatherings included a reception by the Mayor, a concert at the auditorium, a picnic at Lake St. Joseph, an excursion to Ste. Anne de Beaupre and Montmorency Falls, and a trip on the river.

The committee of railway officials appointed to prepare a standard code of operating rules for Canadian railways has completed its work. The results of the committee's investigations and discussion have been embodied in a report which has been submitted to the General Managers of the respective companies. The rules will be subsequently submitted for approval to the Board of Railway Commissioners

TRANSPORTATION APPOINTMENTS.

Algoma Central and Hudson Bay Ry.—C. N. Coburn, heretofore Assistant Division Engineer, Eastern Division C.P.R., Montreal, has been appointed Chief Engineer A. C. and H.B.R., and Manitoulin and North Shore Ry. Office at Sault Ste. Marie, Ont.

Canadian Northern Ry.—F. A. Folger, formerly Superintendent Kingston and Pembroke Ry., has been appointed Trainmaster district 4, C.N.R. Headquarters, Kamsack, Sask.

Canadian Pacific Ry.—A. D. MacTier, heretofore General Fuel Agent, has been appointed Assistant to the Vice-President. Office, Montreal.

T. Britt has been appointed Acting General Fuel Agent.

N. R. DesBrisay, heretofore in the C.P.R. ticket office at St. John, N.B., is reported to have been appointed ticket agent on one of the company's Atlantic steamers.

M. G. Murphy, heretofore chief clerk to the District Passenger Agent, Atlantic Division, St. John, N.B., has been appointed general travelling passenger agent western lines.

E. W. DuVal, heretofore chief clerk to the General Superintendent Western Division, Calgary, Alta., is reported to have been appointed chief clerk to the Assistant General Manager at Winnipeg, succeeding D. C. Coleman, promoted.

H. W. Willis, heretofore Manager of the company's Hotel Vancouver at Vancouver, has been appointed Manager of the Royal Alexandra Hotel, Winnipeg.

J. H. Longworth has been appointed City Freight Agent at Brandon, and Travelling Freight Agent for Western Manitoba. His territory will consist of the city of Brandon, the Lenore and Miniota branches, the Rapid City and Broadview sections, Brandon to Boissevain via Napinka and Deloraine to Lyleton. Headquarters, Brandon, Man.

J. E. Ryan, heretofore Assistant Chief Train Dispatcher (night duty) district 2, Central Division, Winnipeg, has been appointed Chief Train Dispatcher, district 4, Brandon, Man., succeeding the late J. T. Barnes.

E. H. Cook has been appointed rule instructor district 5, Central Division. Headquarters, Moose Jaw, Sask.

The Western Division, which had previously been divided into two operating divisions since the old Western Division was divided into the Central and Western Divisions, was divided into three operating districts June 1. The new districts are:

District 1.—Medicine Hat, Calgary, and Lethbridge sections, including Lethbridge terminal. Headquarters, Medicine Hat, Alta.

District 2.—Laggan section, including Calgary terminals; Edmonton section, Wetaskiwin and Lacombe branches. Headquarters, Calgary, Alta.

District 3.—Sirdar, Cranbrook, Crow's Nest and Macleod sections, Curzon and Kimberley branches. Headquarters, Cranbrook, B.C.

J. S. Lawrence, heretofore Superintendent district 3, Pacific Division, Nelson, B.C., has been appointed Superintendent district 1, Western Division. Office, Medicine Hat, Alta.

A. Hobkirk, heretofore road foreman at Calgary, Alta., has been appointed Trainmaster district 1, Western Division. Office, Lethbridge, Alta.

A. Allan, heretofore assistant Chief Train Dispatcher (night duty) at Calgary, Alta., has been appointed Chief Train Dispatcher, district 1, Western Division, at Medicine Hat, Alta.

J. Niblock, heretofore Superintendent of old district 1, Western Division, has been appointed Superintendent district 2, Western Division. Office, Calgary, Alta.

E. L. Chudleigh, heretofore Assistant Superintendent of old district 1, Western Division, has been appointed Assistant Superintendent district 2, Western Division. Office, Strathcona, Alta.

T. R. Flett, heretofore Trainmaster of old district 1, Western Division, has been appointed Trainmaster district 2, at Calgary, Alta.

C. E. Mansfield, heretofore Chief Train Dispatcher of old district 1, Western Division, has been appointed Trainmaster district 2.

G. Erickson, heretofore Superintendent of old district 2, Western Division, has been appointed Superintendent district 3. Office, Cranbrook, B.C.

J. R. McNabb, heretofore Trainmaster of old district 2, Western Division, has been appointed Trainmaster district 3. Office, Macleod, Alta.

J. H. Scott, heretofore Chief Train Dispatcher of old district 2, Western Division, has been appointed Chief Train Dispatcher, district 3.

F. W. Scott has been appointed roadmaster Calgary section, succeeding J. A. Armstrong. Office, Medicine Hat, Alta.

O. Fryk has been appointed acting roadmaster Laggan section, succeeding F. W. Scott, transferred to the Calgary section.

D. C. Coleman, heretofore chief clerk in the Assistant General Manager's office, Winnipeg, has been appointed Superintendent district 3, Pacific Division, succeeding J. S. Lawrence, transferred. Office, Nelson, B.C.

Stewart Gordon, heretofore acting Manager of the Royal Alexandra Hotel, Winnipeg, has been appointed Manager of the new Empress Hotel at Victoria, B.C., which it is expected will be opened in Aug.

P. Wade has been appointed General Roadmaster district 3, Pacific Division, with headquarters at Nelson. He will have charge of maintenance of way and extra track work, the assistant roadmasters reporting to him.

J. McGrath has been appointed Assistant Roadmaster at Nelson. He will have charge of the Slocan Lake, Rossland, and Trail branches, the Procter extension, the Lardo, Nakusp, and Slocan, and Boundary sections (Nelson to Castlegar Jct.)

E. L. Franson has been appointed Assistant Roadmaster at Eholt. He will have charge of Phœnix and Mother Lode branches, and the Boundary section (Castlegar Jct. to Midway).

J. S. Carter, heretofore District Passenger Agent at Nelson, B.C., has been appointed General Agent, Passenger Department. Office, Spokane, Wash.

F. A. Valentine, heretofore Travelling Passenger Agent at Los Angeles, Cal., has been appointed to a similar position at Spokane, Wash.

F. R. Johnson has been appointed General Agent, Passenger Department, Portland, Ore.

C. B. Reade has been appointed Travelling Passenger Agent, Portland, Ore.

F. M. Cummings has been appointed manager of the Hotel Vancouver, Vancouver, B.C.

Delaware and Hudson Rd.—C. S. Sims, General Manager, has been elected also a director, succeeding A. I. Culver, resigned.

W. H. Williams has been appointed Assistant to the President. Office, New York City.

Dominion Atlantic Ry.—Thos. Cook & Son, 245 Broadway, New York, have been appointed General Ticket Agents for that city.

R. L. Chipman, heretofore chief clerk in the company's office at Halifax, N.S., has been appointed freight agent at New York. Office, pier at foot of East 20th St., New York City

Erie Rd.—J. N. Hill and O. Mills have been elected directors succeeding J. J. Hill and D. O. Mills, resigned. J. N. Hill has also been elected a member of the Executive Committee, succeeding the late S. Spencer.

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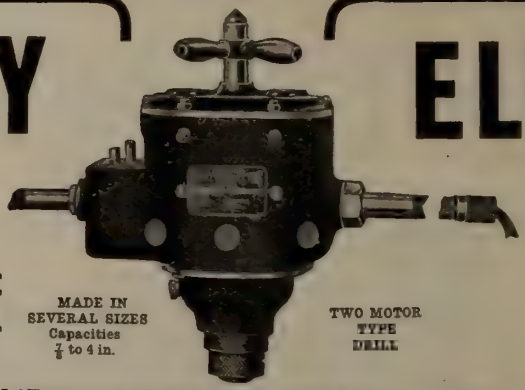

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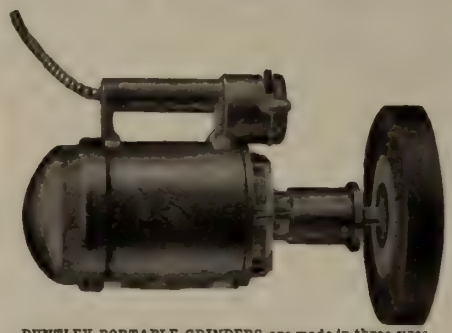

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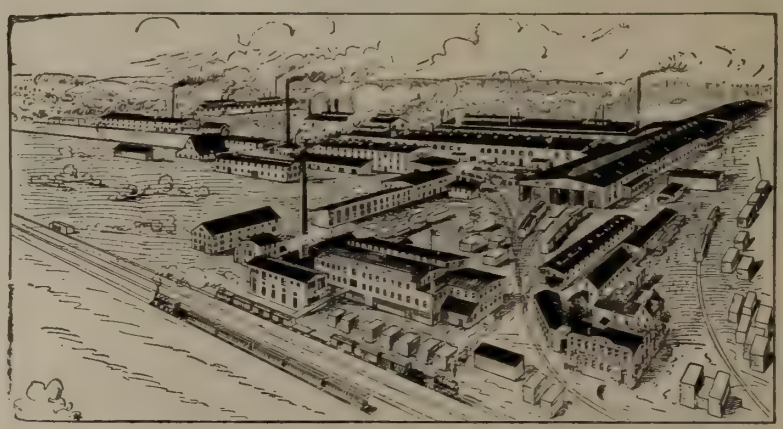

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Grand Trunk Pacific Ry.—C. D. Fisher, heretofore Chief Train Dispatcher, district 3, Central Division, C.P.R., Brandon, is reported to have received an appointment on the G.T. Pacific Ry. at Winnipeg Man.

T. M. Tennant, Port Arthur, Ont., has been employed by the G.T.P.R. to purchase ties. He has resigned his seat in the city council in consequence.

Grand Trunk Ry.—F. J. Henstridge, heretofore chief clerk Division Freight Agent's office, Hamilton, Ont., has been transferred to a similar position in the Division Freight Agent's office, Montreal.

W. R. Tiffin, Superintendent Northern Division, Allandale, Ont., who was on leave of absence, has resumed his duties.

J. D. McMillan has been appointed Assistant Trainmaster districts 11, 12, 13 and 14, Northern Division. Office, Allandale, Ont. We are advised that this appointment is only temporary.

C. H. Dean, heretofore cashier G. T. R. and Wabash Rd., St. Thomas, has been appointed station agent at Welland, Ont., succeeding W. R. White, resigned.

W. S. Wilson has been appointed Chief Dispatcher at Stratford, Ont., succeeding C. G. Bowker, promoted.

The following agents have been appointed: Cardina, Ont., E. J. Wormington; Keene, Ont., T. A. Weir (Acting); Omemee Jct., Ont. W. T. Byam; Brechin, Ont., J. L. Dodds; Stouffville, Ont., C. A. Caldwell; Thornhill, Ont., J. W. Wiggins; Thornton, Ont., W. I. Wilson; Glen Huron, Ont., E. N. Marshall; Nottawa, Ont., E. N. Marshall; Copetown, Ont., J. H. Burke; Merritton, Ont., W. F. Davidson; Thorold, Ont., W. E. Miller; Cargill, Ont., J. T. Clancy; Bluevale, Ont., W. J. Masters; Canfield Jct., Ont., F. W. Shearing; Maxville, Ont., E. J. Goodier; Vankleek Hill, Ont., Jas. Robertson (Acting); Renfrew, Ont., W. H. Harris; Caldwell, Ont., T. J. O'Reilly.

S. G. Tate, heretofore freight agent American Express Co., Liverpool, Eng., has been appointed contracting freight agent G.T.R. Office, Colonial House, Liverpool.

Great Northern Ry., U.S.—W. W. Broughton, heretofore Freight Traffic Manager, has been appointed General Traffic Manager, succeeding to the duties heretofore performed by B. Campbell as Fourth Vice-President. Office, St. Paul, Minn.

W. P. Kenney, heretofore assistant to the Fourth Vice-President, has been appointed Assistant Traffic Manager. Office, St. Paul.

A. L. Craig, heretofore Passenger Traffic Manager, has been appointed General Passenger Agent, with jurisdiction over the passenger department. Office, St. Paul.

The offices of Freight Traffic Manager and Passenger Traffic Manager have been abolished.

Manitoulin and North Shore Ry.—See Algoma Central and Hudson Bay Ry.

The Maritime Coal, Ry. and Power Co. having taken over the Canada Coal and Rd. Co.'s railway and other property June 1, has retained Geo. B. Burchell's services as Manager of its railway.

Michigan Central Rd.—S. W. Brown, heretofore Assistant General Superintendent Lake Shore and Michigan Southern Rd., has been appointed General Superintendent M.C.R., succeeding H. C. Nutt, resigned.

W. H. Sellew, heretofore Divisional Engineer at Detroit, Mich., has been appointed Principal Assistant Engineer there, and is succeeded as Division Engineer by M. C. Cleveland.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—E. L. Cardle, heretofore contracting freight agent at St. Paul, Minn., has been appointed general agent at Portland, Ore.

National Transcontinental Ry. Commission.—G. Grant, C.E., has been appointed Inspector of Construction to the Commission.

National Despatch Great Eastern Line.—The office of D. T. Lawrence, Manager of this company, operating in connection with the G.T.R. System, the Central Vermont Ry., and the Boston and Maine Rd., and connection, has been moved from Buffalo, N.Y., to 110 State St., Boston Mass. The line is not now separately represented in Buffalo, its business being attended to by E. J. Hilliard, Commercial Agent G.T.R.

New York Central Lines.—H. D. Carter, General Freight Agent, has been appointed First Assistant Freight Traffic Manager of lines east. W. S. Kallman, General Freight Agent of the West Shore Rd., has been appointed Second Assistant Freight Traffic Manager of lines east. I .H. Hubbell, First Assistant General Freight Agent of the N.Y.C. and H.R. Rd., has been appointed General Freight Agent of the N.Y.C. and H.R.R., and of the West Shore Rd. W. A. Newman, Second Assistant General Freight Agent, succeeds Mr. Hubbell. D. E. Gelatt, Division Freight Agent at New York, succeeds Mr. Newman.

The Freight Traffic Manager N.Y.C. lines east of Buffalo is F. LeBau, not F. LeBarr as stated in our last issue.

New York, New Haven and Hartford Rd.—B. Campbell, heretofore Fourth Vice-President Great Northern Rd., U.S., has been appointed Fourth Vice-President, N.Y., N.H and H. Rd.

Ottawa and New York Ry., and New York and Ottawa Ry.—F. J. Balch, heretofore chief clerk General Freight Department, has been appointed Assistant General Freight Agent. Office, Ottawa, Ont

G. H. Phillips, heretofore General Freight and Passenger Agent, has been appointed Superintendent and General Freight Agent, S. F. Beamish having resigned the Superintendency.

H. K. Gays, heretofore Assistant General Passenger Agent, has been appointed General Passenger Agent.

A Newfoundland Project.

A cable was received at St. John's, Nfld., June 5, from the Premier in London, Eng., stating that the syndicate which had entered into an agreement with the Newfoundland Government for a fast Atlantic steamship service was prepared to begin the survey of the proposed railway line across the island immediately. This project is a distinct one from that with which the name of Lord Strathcona is connected, although, if carried out, it may form part of the "All Red" round the world line of steamship and railway communication which was discussed at the recent Colonial Conference in London.

The act passed at the last session of the Newfoundland Legislature with respect to the establishment of speedier communication between Great Britain and the continent of America, confirms our agreement made between the Government of the colony and A. L. Ochs, G. Ochs, T. F. Dalglish, carrying on business in London, Eng., and Paris, France, as Ochs Bros., and H. C. Thompson, of London, Eng. The agreement sets forth that the contractors desire to form a company with the title of the British Newfoundland Railway and Steamship Co., for the purpose of establishing a speedy means of communication between Great Britain, Ireland and the continent of America, by way of Newfoundland. The contractors are empowered to construct a railway in Newfoundland from Notre Dame Bay to the western coast of the island, the route to be subject to the approval of the Government. The contractors propose to provide three steamships of not less than 5,000 tons and capable of maintaining an average ocean speed of 17 knots an hour in moderate weather; such steamships to sail from some port in Great Britain or Ireland once a week, and call at Notre Dame Bay, St. John's, Nfld.; a port in Canada or in the U.S.; and to make similar calls on the return trip. From Jan. 1 to May 1 in each year, the steamships shall only be bound to call at St. John's and the Canadian or U.S. port agreed on. The contractors shall also maintain a 20-knot steamship to connect the port on the western coast of Newfoundland with a port on the Gaspe coast of Quebec or New Brunswick, two round trips a week to be made by such steamships. The contractors are also authorized to connect the projected railway with the existing railway of the colony, or to construct a separate line into St. John's. The agreement provides for the fixing of rates; frees the vessels from port and pilotage charges, etc.; and for the payment by the Government of a subsidy of $75,000 a year for 25 years, for the carriage of the mails. The remuneration for this service shall be fixed by arbitration if the agreement is extended beyond the 25 years. The agreement also sets forth that the Government will grant a 100 ft. right of way for the railway through all crown lands; provided an area of one square mile of crown lands at Notre Dame Bay, and on the west coast for terminal purposes, and 1,500 acres of land in respect of each mile of railway constructed, the total area of land to be granted not to exceed 125,000 acres. The railway is to be completed within five years. The agreement also sets forth that within eight years the company may construct a railway from some point on the previously-mentioned line to the Strait of Belle Isle, and through the Labrador territory subject to the jurisdiction of Newfoundland, to the Quebec boundary. Power is also given to construct a tunnel under the Strait of Belle Isle to connect the two portions of the railway, or to operate a railway ferry across the strait; and at the Quebec boundary to connect with any railway constructed under the laws of the Province of Quebec or of the Dominion of Canada. No subsidies are to be given for the construction of this line except the track 100 ft. wide, a reasonable area for stations and a square mile for terminals on either shore of the Strait of Belle Isle, but the Government grants and secures to the company the sole right to tunnel under the strait for 25 years from the completion of its railway. The company may construct a telegraph line along its railway, but such line is to be used for the purposes of the contractors only, except when it may be required for Government purposes. In the event of any differences arising between the parties out of the agreement, the questions are to be submitted to arbitration.

National Transcontinental Railway.

The central route for the Eastern Division of the line through New Brunswick has been finally approved, and the necessary order-in-council has been passed. Instructions have been given to the engineers to complete the location from Chipman to Grand Falls, N.B. This work will take several weeks to complete, and it is expected that tenders for the construction of this section will be asked for at an early date. The line is under contract from Moncton westerly for 50 miles, the G.T. Pacific Ry. Co. having the contract. Tenders were received to June 25 by the commissioners for the construction of an eight mile section from the terminal point of the 50 mile section west of Moncton to Chipman. When the Chipman-Grand Falls section has been let, the whole of the line from Quebec to Moncton will be under contract as well as a considerable mileage between Quebec and Winnipeg. The gap for which the location has not been completed, and for which tenders have not been asked, include

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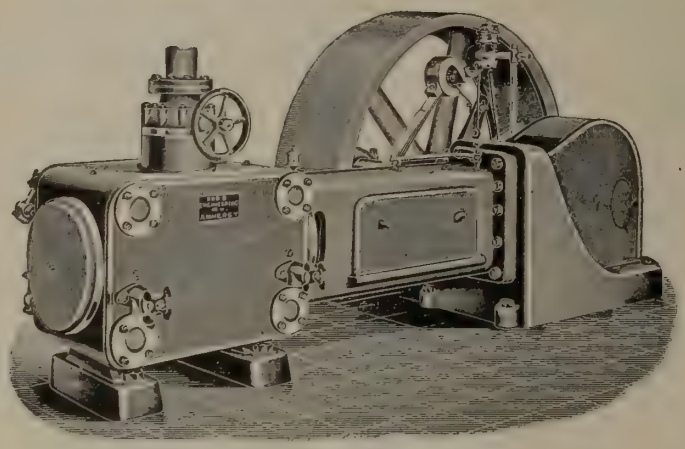

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the mileage between the junction of the line with the Temiskaming and Northern Ontario Ry., and the junction with the Lake Superior branch from Fort William and Port Arthur, Ont. Of the three contracts recently given to the G.T. Pacific Ry. Co., that for 50 miles from La Tuque westerly has been sublet to McDonald and O'Brien. It has been reported in the daily papers that a U.S. contracting firm had obtained a sub-contract to do the work on the Moncton 50 miles, and that the G.T. Pacific Construction Co. would do the work on the 150 mile section easterly from the Abitibi River.

The Transcontinental Railway Commissioners made an inspection trip over the Quebec-La Tuque section, and subsequently went to Winnipeg, where they arrived June 10. Before leaving they authorized the statement that work on the shops and yards at that point would be commenced forthwith.

Tenders were received by the Commissioners to June 25 for the construction and erection of the superstructure of five steel bridges in District B. The bridges are to be in accordance with the general specifications for steel bridges of the Department of Railways, 1905, and to be able to stand the test of the load designated "heavy" in the specifications.

Tenders were also received up to June 25 for 65,371 tons of 80-lb. steel rails, either open hearth or Bessemer at the option of the Commissioners, together with the necessary fastenings for the same.

Tenders for the supply of 200,000 ties were received up to June 14. Delivery is to be made commencing April 1, 1908, at Rennie Jct. siding, Ont., or on the line of the Transcontinental Ry. eastwardly therefrom in such numbers as to allow 3,000 ties to the mile.

GRAND TRUNK PACIFIC RY.

C. Schrieber, Consulting Engineer to the Department of Railways, is making a trip of inspection over the route of the line from Winnipeg to the Pacific Coast. He visited various points on the route between Winnipeg and Edmonton, and will follow the route through the Yellowhead Pass to the Pacific Coast. Upon his report the final approval of the route will depend.

F. W. Morse, Vice-President, stated as the result of his recent visit to Winnipeg and various points at which construction is being gone on with, that things are in a much more satisfactory shape than was thought possible a few weeks ago. The delays caused by the severe winter, however, had extinguished all hope of being able to connect Edmonton with the Great Lakes this year. At the present rate of progress the rails will reach Saskatoon, which is considerably more than half the distance from Winnipeg to Edmonton, by the fall.

The route from Portage la Prairie to Winnipeg has been approved, and on June 11 it was reported that C. P. Wright, a local contractor, had started grading operations. The portion of the route in Winnipeg is not approved of by the city authorities, and the Board of Works passed a resolution June 12 protesting against the proposed entry into Fort Rouge. A subcommittee was appointed to set out the objections fully and to take steps to oppose the plans when the Railway Commission meets in Winnipeg in July. We are officially advised that the contract of the construction of the roadbed between Winnipeg and Portage la Prairie about 54 miles, has been let to Treat & Johnston, of Winnipeg.

F. W. Morse is quoted as having stated that the branch line from near Yorkton to Regina, Sask., would be the first branch to be constructed west of Winnipeg.

Vote on Per Diem Rules.

The following circular was issued by the Secretary of the American Railway Association June 1. At the meeting of the Association held at Chicago April 24, the Secretary was directed to submit to the members for a letter ballot the question of the adoption of the proposed new per diem rule 3, clauses a to m, with the propositions separated so as to permit a vote upon new rule 3 unamended, and with the amendment to the latter part of clause m included. The following resolution was also adopted:

"Resolved—That the question of the adoption of rule 3 of the per diem rules as herewith submitted be presented to the members of the Association for a letter ballot; the new rule, if adopted, to take effect Sept. 1, 1907, provided it is approved by a majority of the membership of the Association representing two-thirds of the cars owned or controlled by the members of the Association, and after announcement by the Secretary of the requisite majority having been obtained. The ballot to close May 25, 1907."

The total membership of the Association is 328, and the cars owned and controlled by the members 2,087,846. The majority requisite for approval was 165 members, owning and controlling 1,391,897 cars. 45 memberships, owning or controlling 58,262 cars, did not vote. The vote on the adoption of the first proposed form of rule 3 (unamended) was as follows: Yes—174 memberships, representing 1,340,467 cars owned or controlled. No—99 memberships, representing 677,548 cars owned or controlled. 10 memberships of those who voted, representing 11,569 cars owned or controlled, did not vote on this proposition. The affirmative vote on the first proposed form of per diem rule 3 was a majority of the memberships of the Association, but they do not represent two-thirds of the cars owned or controlled by the members of the Association. The first proposed form of rule 3 is, therefore, not adopted.

The vote on the adoption of the second proposed form of rule 3 (amended) was as follows: Yes—155 memberships, representing 1,122,507 cars owned or controlled. No—124 memberships, representing 899,454 cars owned or controlled. 4 memberships of those who voted, representing 7,623 cars, did not vote on this proposition. The affirmative vote on the adoption of the second proposed form of per diem rule 3 was not either a majority of the memberships nor two-thirds of the cars owned and controlled by the members of the Association. The second proposed form of rule 3 is, therefore, not adopted. Both of the proposed new forms of per diem rule 3 are, therefore, lost.

Attention is called to the fact that by the vote of the Association, as announced March 23, 1907, per diem rule 3, as now printed in the code of per diem rules was abolished from July 1, 1907, when the 50c per diem rate becomes effective.

Orders by the Railway Commissioners.

3163. May 23.—Authorizing G.T.R. to construct a second track from North Parkdale Station to Toronto Jct., Ont.

3174-3176. June 14.—To carry its wires over certain railways.

3177. June 14.—Rescinding order 2533 and granting Bell Telephone Co. leave to cross C.P.R. tracks at Drew St., Woodstock, Ont.

3178. June 14.—Authorizing C.P.R. to construct a spur near Jaffray, B.C., to the Jewell Lumber Co.'s premises.

3179. June 14.—Authorizing C.P.R. to construct spurs at Lundbrek, Alta., on Breckenridge & Lund Coal Co.'s property.

3180. June 14.—Authorizing C.P.R. to construct a spur from its Cranbrook Section to the East Kootenay Lumber Co.'s premises.

3181. June 14.—Approving interlocking plant installed in the parish of St. James, Man., where the C.P.R. crosses the Northern Extension Ry.

3182. June 14.—Authorizing opening for traffic of the Michigan Central Rd. second track between Bridgeburg and Niagara Jct., Ont., 2.10 miles; also its new track between Waterford and Hagersville, Ont., 12.75 miles.

3183. June 14.—Authorizing the C.P.R. to open for traffic its second track extending from Molson and Whitemouth, Man., 16 miles.

3184. June 15.—Authorizing the National Transcontinental Ry. Commissioners to operate trains on the N.T.R. where it crosses the Canadian Northern Quebec Ry. track near Tawachiche Station, Que., pending installation of interlocking plant as provided in order 1945.

3185. June 13.—Authorizing the Dominion Minister of Public Works to construct a highway crossing where the Quebec Ry. Light and Power Co.'s line intersects the road leading to the wharf, in the Parish of Chateau Richer, Que.

3186. June 14.—Approving of G.T.R. book of reference in connection with proposed deviation and grade improvement of railway between St. Lambert and Ste. Rosalie Jct., Que., approved in order 2895.

3187. June 13.—Authorizing C.P.R. to construct a branch line across Dewdney St., and upon and along Smith St., Regina, Sask.

3188. June 12.—Authorizing the G.T. Pacific Ry. to connect its tracks with the Midland Ry. of Manitoba and the Canadian Northern Ry. tracks at Portage la Prairie, Man.

3189. June 13.—Amending order of Sept. 26, 1906, granting the C.P.R. leave to construct its Toronto-Sudbury branch through the Town of Bala, by substituting in lieu of the level crossing a subway under the C.P.R. tracks.

The Canadian Northern Ex. Co. has been registered at Regina, Sask., under the ordinance of the Northwest Territories respecting foreign companies.

In reference to the report mentioned in our last issue to the effect that the Intercolonial Ry. would in future be known in abreviated form as the I.R.C. instead of the I.C.R., we are advised that the initial which appear on the ends of box freight cars and in some cases on their doors are being painted I.R.C. instead of I.C.R. This is all there is to the matter.

The Assiniboia, the first of the two additional steamships ordered by the C.P.R. for the Great Lakes, was launched at Glasgow, Scotland, June 26. Her dimensions are: Length, 336 ft.; breadth, 46 ft.; depth, 26¾ ft.; built of steel, constructed to be classed at Lloyds as A1 for Canadian lake service. She will have accommodation for over 250 first-class passengers. She will have a speed of over 16 miles an hour, with all the modern devices for the safety and comfort of her passengers. The interior fittings and furnishings will be of the latest and most improved patterns, remarkably more for their solidity, simplicity, good taste and quality, than for mere display. The Assiniboia will cross the Atlantic under her own steam in Sept., and will be cut in two at Quebec and rejoined at some point on Lake Erie above the Welland Canal. The other steamship which is being built for the C.P.R. at the same place will be named Keewatin.

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The Death of A. W. Mackenzie.

Alex. Wm. Mackenzie, second son of Wm. Mackenzie, President Canadian Northern Ry., etc., died at his house, 97 Glen Road, Toronto, on June 6. He was at the Ontario Jockey Club races at Toronto on May 30, and, on returning home in the evening, complained of being unwell. Dr. Jno. Caven, his family physician, was called in, and after a consultation with Dr. Primrose, it was decided that he was suffering from appendicitis, and that the only possible chance of saving his life was to operate. Dr. Primrose performed the operation on June 1, and Mr. Mackenzie progressed favorably until about 4 p.m. on June 6, when he suddenly grew worse, dying at 8.30 p.m., his wife, mother, brother, J. M. Mackenzie, and mother-in-law, Mrs. Kirkland, being with him. His father and four sisters, Miss Mackenzie, and the Misses Ethel, Catherine and Grace Mackenzie, were in England, and his two other sisters, Mrs. A. M. Grantham and Mrs. Scott Griffin, were on the Atlantic en route home.

A. W. Mackenzie was born at Kirkfield, Ont., Dec. 5, 1877, and was educated at Ridley College, St. Catharines, Ont., and at Toronto University. After leaving college, he at once entered business life in connection with his father's varied interests, and at the time of his death was Treasurer of the Canadian Northern Ry. Co., Canadian Northern Quebec Ry. Co., Canadian Northern Ontario Ry. Co., Canadian Northern Express Co., Canadian Northern Telegraph Co., and the Halifax and Southwestern Ry. Co.; Secretary-Treasurer of the Inverness Railway and Coal Co., and the Pacific Coal and Oil Co.; Purchasing Agent, Mackenzie, Mann & Co., Limited; Vice-President of the Rio de Janeiro Tramway, Light and Power Co., and the Sao Paulo Tramway, Light and Power Co. He was also a director of the Ontario Jockey Club, and a member of the Toronto Club, the Toronto Hunt and Country Club, the Albany Club, and the Lambton Golf club.

He married Miss Kirkland, only daughter of the late A. Kirkland, Manager of the Bank of Montreal, Toronto, who, with two children, a boy of five and a girl aged two, survives him. He was a thorough, all-round sportsman, one of the best cricketers in Ontario, a good rugby football player, an excellent horseman, following the hounds well, and also a polo player. With his brother, R. J. Mackenzie, of Winnipeg, he owned the Kirkfield stable of racehorses.

The funeral, which took place on June 9, was a military one, as he was a lieutenant in the 48th Highlanders, and was very largely attended. The coffin, draped with a flag, was carried on a gun carriage to Toronto Union Station, and thence by special train, consisting of the Canadian Northern Ry private cars Atikokan and Athabasca, the palace car Balmoral, and a first-class car and baggage car, over the G.T.R. to Kirkfield, where service was held in the Roman Catholic church, the interment taking place in the cemetery. The relatives present were: Mrs. Wm. Mackenzie, R. J. and J. M. Mackenzie, A. M. Grantham, Scott Griffin, Ewan and Alex. Mackenzie, uncles, and Capt. Kirkland, brother-in-law. The honorary citizen pallbearers were: J. L. Counsell, A. J. Hills, T. G. Leith, K. R. Marshall, J. Meredith and G. G. Mitchell. The honorary military pallbearers were lieutenants of the 48th Highlanders, and the coffin was carried by non-commissioned officers. B. Company, of which A. W. Mackenzie was lieutenant, formed the escort.

Mrs. Scott Griffin and Mrs. A. M. Grantham only arrived in Toronto about an hour before the funeral, their husbands having met their steamer in New York and broken the news to them. R. J. Mackenzie, the oldest brother, reached Toronto from Winnipeg the morning of the funeral. Wm. Mackenzie sailed from England by the first steamer possible, arriving in Toronto on June 18, and the Misses Mackenzie arrived at the same time, although they reached New York by another steamer. They were met there by Mrs. Mackenzie, Mrs. Grantham and Mr. and Mrs. Scott Griffin.

A. W. Mackenzie was a young man of great promise, and with a splendid future before him. With the great wealth which he would have inherited, and with the enormous business enterprises of which he would have become one of the chief owners, he would, had he been spared, have been one of the most prominent men in Canada in a few years. He

ALEXANDER WILLIAM MACKENZIE,
Born Dec. 5, 1877. Died June 6, 1907.

was an industrious worker, with a good grasp of business matters, a clean sportsman and a thoroughly manly and steady man in every way. And he was absolutely unspoiled and without affectation or "side." To his father and mother, especially, the blow is a very severe one. By his friends, "Alec" Mackenzie will be truly mourned. He had a very lovable disposition, and was most constant and loyal in his friendships.

Railway Accounting Methods.

The U.S. Interstate Commerce Commission has issued the following circular to railway companies under its jurisdiction:

The purpose of this circular is to advise carriers subject to the act to regulate commerce that the Commission has duly considered the recommendations submitted by the Association of American Railway Accounting Officers, dated April 26, 1907, relative to—

Operating revenue accounts,
Operating expense accounts
Outside operations,
Train, engine, and car miles,
Construction and equipment expenditures,

and the several texts therefor, but it is not at this time prepared to promulgate a final order covering the details of these accounts, Recognizing, however, the necessity for advising carriers at the earliest practicable date of the intentions of the Commission in respect to the general and the primary operating accounts to be put in force on July 1, 1907, and to the end that preparations may be made by carriers for the introduction of these accounts on the date named, this circular, defining in a general way the objects and scope of the operating accounts, is issued.

The general and the primary operating accounts which are herein promulgated are drawn with the view of eliminating from such accounts, as far as practicable, all revenues earned or expenditures made that are not directly incident to performing the service of transportation, such as operations for which specific arbitraries or allowances are included in the rate for special service other than rail transportation, or for which an additional collection is made from shippers, consignees, or passengers for a special service performed, or operations designed or used to furnish products or services not directly connected with rail transportation. Such operations are classified as 'Outside operations" and will be dealt with directly through the Income Account.

The requirements of operating officers, as well as the requirements of the Commission, have been held in mind in formulating these classifications, and in this connection it may be proper to add that carriers are at liberty to sub-divide the primary accounts here submitted to meet local requirements or temporary conditions, provided that the integrity of these primary accounts be not destroyed, and, further, that a record of important and permanent sub-divisions be filed with this office. The Commission has no desire to obstruct the further development of accounting methods. On the contrary, its aim will be to co-operate with the carriers to perfect such methods. The accounts promulgated by this circular are:

1. Operating revenue accounts;
2. Operating expense accounts; and

the general and the primary accounts under each will be found in the classifications herewith submitted.

OPERATING REVENUE ACCOUNTS

as herein defined, cover—

1. Revenues derived from the transportation of traffic, including mail and express, for which a specific rate or charge is made.

2. Revenues derived from operations other than the transportation of traffic, the expenses of which can not be accurately determined and separated from operating expenses.

Revenues from operations are consequently divided into two general accounts, namely:

I. Revenue from transportation, and
II. Revenues from operations other than transportation.

These two general accounts are subdivided into nineteen primary accounts, which analysis results in the following classification of operating revenues:

I. Revenue from transportation—
1. Freight revenue.
2. Passenger revenue.
3. Excess-baggage revenue.
4. Parlor and chair car revenue.
5. Mail revenue.
6. Express revenue
7. Milk revenue (on passenger trains)
8. Other passenger train service.

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9. Switching revenue.
10. Special service train revenue.
11. Miscellaneous transportation revenue.

II. Revenue from operations other than transportation—
12. Station and train privileges.
13. Parcel-room receipts.
14. Storage—freight.
15. Storage—baggage.
16. Car service.
17. Telegraph service.
18. Rents of buildings and other property.
19. Miscellaneous.

The aggregate of the revenues covered by the nineteen primary accounts listed above produces, "Total operating revenue," which reduced by "Operating expenses," leaves "Net operating revenue," a phrase which is substituted for the phrase "Income from operation" as used hitherto on page 31 of the form for annual report of carriers.

From "Net operating revenue" taxes are to be deducted, and the remainder, called "Operating income," will be carried to the Income Account.

OPERATING EXPENSE ACCOUNTS

as herein defined, cover—

1. Costs to maintain the integrity of the property operated from which operating revenues are derived.

2. Costs incident to transportation and administration incurred in performing the services incident to the production of the revenues enumerated in the classification of operating revenue accounts.

It should be understood that these operating expenses must not be burdened with expenditures for additions, such as new and additional equipment, tracks, buildings, ballast, and other additions to the property, the purposes of which are to improve the property operated; with expenditures for maintaining and operating property, the operations of which are classified as "Outside operations;" or with expenditures for rents of property used in operation, such as tracks, yards, terminals, and equipment. Neither should they be reduced by rents received for the use of a carrier's property by another carrier or others, such as rents for tracks, yards, terminals, and equipment; nor for buildings and other property the operating costs of which can be separated from other costs of maintenance and operation.

Operating expenses are divided into five general accounts, viz.:

I. Maintenance of way and structures.
II. Maintenance of equipment.
III. Traffic expenses.
IV. Transportation expenses.
V. General expenses.

These five general accounts are subdivided into 121 primary accounts, which analysis results in the following classification of operating expenses:

I. Maintenance of Way and Structures—
Superintendence.
Ballast.
Ties.
Rails.
Other track material.
Roadway and track.
Removal of snow, sand, and ice.
Tunnels.
Bridges, trestles, and culverts.
Over and under grade crossings.
Grade crossings, fences, cattle guards, and signs.
Snow and sand fences and snowsheds.
Signals and interlocking plants.
Telegraph and telephone lines.
Electric power transmission.
Buildings, fixtures, and grounds.
Docks and wharves.
Roadway tools and supplies.
Work equipment—Repairs.
Work equipment—Renewals.
Work equipment—Depreciation.
Injuries to persons.
Stationery and printing.
Insurance.
Other expenses.
Maintaining joint tracks, yards, and other facilities—Dr.
Maintaining joint tracks, yards, and other facilities—Cr.

II. Maintenance of Equipment—
Superintendence.
Steam locomotives—Repairs.
Steam locomotives—Renewals.
Steam locomotives—Depreciation.
Electric locomotives—Repairs.
Electric locomotives—Renewals.
Electric locomotives—Depreciation.
Passenger train cars—Repairs.
Passenger train cars—Renewals.
Passenger train cars—Depreciation.
Freight train cars—Repairs.
Freight train cars—Renewals.
Freight train cars—Depreciation.
Electric equipment of cars—Repairs.
Electric equipment of cars—Renewals.
Electric equipment of cars—Depreciation.
Floating equipment—Repairs.
Floating equipment—Renewals
Floating equipment—Depreciation.
Shop machinery and tools.
Power plant equipment.
Injuries to persons.
Stationery and printing.
Insurance.
Other expenses.
Maintaining joint equipment at terminals—Dr.
Maintaining joint equipment at terminals—Cr.

III. Traffic Expenses—
Superintendence.
Outside agencies.
Advertising.
Traffic associations.
Fast freight lines.
Industrial and immigration bureaus.
Stationery and printing.
Insurance.
Other expenses.

IV. Transportation Expenses—
Superintendence.
Dispatching trains.
Station employes.
Weighing and car service associations.
Stock yards and grain elevators.
Coal and ore docks.
Station supplies and expenses.
Yardmasters and their clerks.
Yard conductors and brakemen.
Yard switch and signal tenders.
Yard supplies and expenses.
Yard enginemen.
Enginehouse expenses—Yard.
Fuel for yard locomotives.
Water for yard locomotives.
Lubrication of yard locomotives.
Other supplies for yard locomotives.
Operating joint yards and terminals—Dr.
Operating joint yards and terminals—Cr.
Motormen.
Road enginemen.
Enginehouse expenses—Road.
Fuel for road locomotives.
Water for road locomotives.
Lubrication of road locomotives.
Other supplies for road locomotives
Operating power plants.
Purchased power.
Road trainmen.
Train supplies and expenses.
Interlockers, block, and other signals—Operation.
Crossing flagmen and gatemen.
Drawbridge operation.
Clearing wrecks.
Telegraph and telephone—Operation.
Operating floating equpiment.
Express service.
Stationery and printing.
Insurance.
Other expenses.
Loss and damage—Freight.
Loss and damage—Baggage.
Damage to property.
Damage to stock on right of way.
Injuries to persons.
Operating joint tracks—Dr.
Operating joint tracks—Cr.

V. General Expenses—
Salaries and expenses of general officers.
Salaries and expenses of clerks and attendants.
General office supplies and expenses.
Law expenses.
Insurance.
Relief department expenses
Pensions.
Stationery and printing.
Other expenses.
General administration joint tracks, yards, and terminals—Dr.
General administration joint tracks, yards, and terminals—Cr.

It will be observed that the primary accounts of operating expenses have been accepted as recommended by the Association of American Railway Accounting Officers, with the exception of

Hire of locomotives—Debit balance.

Mileage and per diem of passenger train cars—Debit balance, and

Mileage and per diem of freight train cars—Debit balance.

It is held that with certain modifications, which will be fully explained in the text when promulgated, the revenues drawn from the expenses incident to the hire of equipment should be treated as an income item and dealt with through the income account rather than through the operating accounts.

It should be also observed that the accounts are not numbered. The reason for this is that it has not been possible to arrive at any final conclusion relative to the extent to which the rule of depreciation should be applied to the maintenance of way and structure accounts. It is intended to make this matter a subject of special investigation during the coming fiscal year.

In case this circular does not contain adequate information for the purpose for which it is issued accounting officers are requested to write for more definite instructions.

In connection with the foregoing the following extracts from the report of the Comptroller of Railways Statistics for Canada dated Nov. 13, 1906, will be of interest:

"By way of preface to my first report, it may not be considered amiss to allude to the steps which have been taken to reorganize the statistical branch of this department. The methods which had been followed up to July 1 last, when I was asked by you to take charge, were obviously defective. They had been adopted upwards of 30 years ago, when railway development in Canada was on a relatively small scale, and with slight modifications were continued down to this year. They were in keeping with the primitive conditions which prevailed in 1875; but had, by a natural process, become practically obsolete for present purposes. In this situation I was asked by you to make such changes as would place our railway statistics on an up-to-date basis, so that accurate and far-reaching comparisons might be made between the results of operation in Canada and in other countries. It was decided that the schedules of the Interstate Commerce Commission at Washington would best accomplish that purpose. They had been worked out with great care during a period of years, and were regarded as the most complete and comprehensive available. By applying them to Canadian railways, it was believed that valuable and helpful comparisons might

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be made between the business of transportation in the Dominion and that being carried on, under similar conditions, in the United States. It is gratifying to be able to report that not a single railway made default this year in the submission of statistical data. In preceding years there were a number of delinquents. The new schedules will be made the basis of our statistics for the current fiscal year, and will be sent out in the course of a few weeks. It is possible the usual difficulties will be encountered in fitting a new system to the railways which have grown accustomed to the old forms; but the principal roads will be quite prepared to meet the demands upon them. Their methods of book-keeping will enable them to satisfactorily answer the somewhat elaborate table of questions, and in this way it is hoped the data for 1907 will be reasonably full and accurate. In the case of the smaller lines, it may be that a year or two will elapse before they will be in a position to readily supply the information required of them. Every effort however, will be made on the part of this office to assist them in the matter." Mr. Payne wrote us on June 27: "The change in the schedules made by the Interstate Commerce Commission has relation almost wholly to the operating expenses. The classification for two or three years past has been limited to some 57 items, and it has now been decided to elaborate these to over 100. As you are aware, we have adopted the schedules and classifications of the I.C. Commission, and for the purposes of uniformity we intend to follow this new elaboration. It may be that we shall not be able to carry it into effect for another year, and, to a large extent, it concerns only the principal railways. Nothing has yet been issued from this office on the subject."

The recommendations of the Association of American Accounting Officers referred to in the Interstate Commerce Commission's circular were prepared by a committee of 25 members. In a recent interview in the Montreal Gazette, I. G. Ogden, Third Vice-President C.P.R., said that that company would willingly adopt all the requests of the Interstate Commission, in order to standardize the system of railway accounting on this continent, not only in the interest of the C.P.R. itself, but of European investors, who would thereby at once secure an absolutely accurate method of comparison between the Canadian and U.S. roads. Mr. Ogden further said: "I have been familiar all the way through with the proceedings leading up to this order of the Interstate Commerce Commission, as I was one of the committee of 25 American railway accountants and officers who were conferring with the chief statistician of the Interstate Commerce Commission on the negotiations for the adoption of a standard system. And although I was unable to attend the meetings I was kept in close touch with their proceedings. I see no objection to the main features of the new order. In fact in a great many things the new system is really an adoption of the accounting system which has been in use by the C.P.R. ever since its organization. Take, for instance, the very important question of taxes. The C.P.R. has always included them in its operation expenses. Under the new rule all roads in the U.S. are to do the same, and, if as seems likely, the Canadian Railway Commission adopts the same system, all the Canadian railways will have to do the same. We expect to use the new classification of accounts as proposed by the Interstate Commerce Commission, although there were several variations regarding details which we would have desired. I hope that the Comptroller of Railway Statistics and the Canadian Railway Commission will practically adopt the new classification, as it will make comparison between Canadian railways amongst themselves, and also between Canadian and U.S. railways comparatively easy. The result will be that European and other investors will be in a far better position to compare the operations of the different railways on this continent and use the published figures as a standard guide to investment, and that is why the C.P.R. has decided to adopt this system regardless of any objections to minor details."

F. A. Shaw has been appointed commercial agent, and A. Macdonald contracting freight agent C.P.R. at Montreal, and not on the C.N. Quebec Ry., as stated in our last issue.

J. A. Sheedy has been appointed Master of Bridges and Buildings, Western Division, G.T.R., with charge of all matters pertaining to bridge and building department. Office, Durand, Mich.

Barlow Cumberland, Vice-President Niagara Navigation Co., in enclosing his renewal subscription to THE RAILWAY AND MARINE WORLD recently, said: "With congratulations on the advance of the paper to be one of greatest interest and absolute value."

We have been advised that while consideration is being given to the proposal to lengthen the Upper Lakes steamers Athabasca, Alberta and Manitoba, no decision has been reached. If the work is done at all it will be done during next winter, and the lengthened steamers will be ready for the season of navigation of 1908.

In connection with the recent trip of Prince Fushimi of Japan through Canada the following decorations, etc., have been distributed: Sir Thos. G. Shaughnessy, President C.P.R., Order of the Sacred Treasure, Second Class; W. R. Baker, Assistant to President C.P.R., Order of the Sacred Treasure, Third Class; C. M. Hays, Second Vice-President and General Manager G.T.R., Order of the Rising Sun of the Third Class; H. R. Charlton, Advertising Agent G.T.R., Order of the Sacred Treasure of the Sixth Class; D. Pottinger, I.S.O., General Manager Intercolonial Ry., Order of the Rising Sun of the Fifth Class.

Thos. Britt, who has been appointed acting General Fuel Agent, C.P.R., at Montreal, was born there Feb. 3, 1871. After leaving school he entered Carbray, Routh & Co.'s service in Montreal, serving in a junior capacity up to Feb. 1, 1887, when he entered the C.P.R. Stores Department service as a junior clerk. Shortly afterwards he was transferred to the fuel branch of the Stores Department, and remained with that branch during the period following its transfer to and as part of the Car Service Department in June, 1892. Upon the organization of the Fuel Department in Nov., 1899, he was appointed chief clerk and remained in that capacity until his present appointment in June, 1907.

E. D. MacKenzie, Canadian Freight Agent Pennsylvania Rd., who has been located in Toronto for a number of years, resigned recently to go into private business at Oil City, Pa. Before leaving he was presented with a silver loving-cup by Toronto transportation officials, D. D'E. Cooper, Canadian Freight Agent Lehigh Valley Rd., making the presentation, and M. H. Brown, General Freight Agent C.P.R., Ontario Division, presiding at the gathering. Since the foregoing was written we have been officially advised that Mr. MacKenzie has been granted three months' furlough, as he has some personal matters which he wishes to take up before definitely deciding as to leaving the company's service. The management would very much regret to see Mr. MacKenzie resign, therefore nothing will be done to fill his position permanently until he definitely decides whether he will return to the service or not.

Canadian Pacific Railway Supply Cars.

By J. A. Callaghan, General Storekeeper, C.P.R.

On the C.P.R. supply cars have been in running service for something like 20 years. I believe we are the originators of this important arm of the stores service, our first cars going into commission early in the eighties; be this as it may, and granting we are amongst the pioneer railway companies using supply cars, we are far enough beyond the experimental period in operating them to be quite satisfied as to their value.

To serve the company's lines east of the Great Lakes we have three modern supply cars which were put into commission early this year. They are 41 ft. long over frame or 40 ft. 2 in. clear length inside, 9 ft. 5 in. wide over frame or 8½ ft. clear width inside, with a clearance height inside of 8 ft. They are fitted up with shelving arranged to take care of the various small supplies for stations, sections, etc. Oil tanks are provided with capacity of 1,500 gal. headlight, 150 gal. signal, and 150 gal. car oil. Sleeping accommodation is provided for the man in charge, and he can, when necessary, get his own meals; in short, as the supply car men practically live in these cars from 22 to 26 days in the month, we have aimed at making them as comfortable as possible.

Following is an outline of the method followed on our line in handling the supply car portion of stores department business. Requisitions from the various district superintendents and others who are authorized to issue same are received in the General Storekeeper's office on the 25th of the month preceding one in which supplies are required. They are then checked, indexed and assorted as to districts, after which they are passed along to the shipping slip clerks, where abstracts from them are made in triplicate. The original requisitions are then given to the supply car staff, who prepare forms which are simply a summary of the requisitions. This done the original requisitions are returned to the office for file. The material is then picked out and loaded into the cars. Headlight oil, which is a large item in the stocking of the cars, is handled as follows: The oil company delivers the oil to us in tanks drawn by horses right alongside of cars, and the oil is pumped out direct from these into our tanks in the cars by air. All other materials are loaded from the general store into small lorry trucks and are run out of the building on rails to the side doors of the cars, so that the labor loading into the cars is reduced to the minimum. When cars are properly stocked and ready to start out, and we figure on getting them away first day of each month, the man in charge is given two of the forms already referred to, namely, the duplicate and triplicate, the original being retained in the general store. Assuming the man and car are now ready for the trip, and the supply car man has wired the superintendent in charge of the district he will first cover advising dates, train numbers, time of departure, etc., so that all concerned may be in turn advised by the superintendent, the beginning of a 2,400 mile run is made. At the various stopping places the goods are delivered from the car to agents and others when the supply car man has satisfied himself the material is necessary and that the worn-out articles are on hand to be turned in. The receipt covering the delivery is made by the party receiving goods signing the duplicate and triplicate forms, which are altered to agree exactly with the goods delivered. This method is followed throughout the trip and the duplicate form so signed is promptly mailed to the General Storekeeper's office at the close of each day's business where they are compared with the originals. These latter forms are then filled out as to weights,

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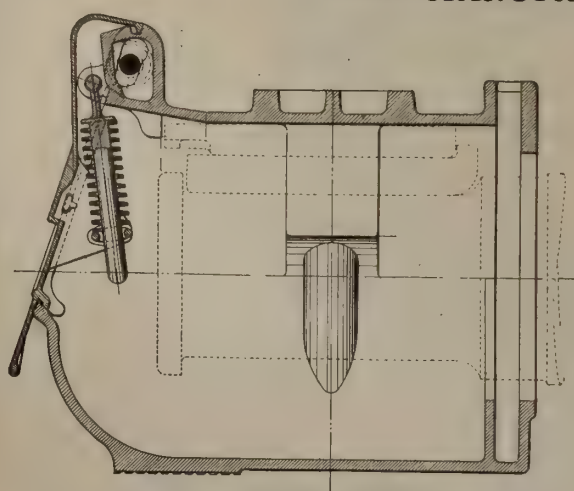

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units, prices, etc., and forwarded to the audit office for invoicing. The triplicates are delivered to party receiving goods, who pass them on to their district superintendent for his record and when same have served this latter official's purpose they are returned to the office of the General Storekeeper.

On the return of cars to headquarters a report is made by each of the men covering all transactions other than the regular, such as non-issuance of supplies account, excessive orders, non-turning in of worn-out material, extraordinary issues, account wrecks, etc., all of which are incorporated in one statement and forwarded to the office of the Vice-President. This about completes the operating details.

With regard to the labor saving in the distribution of material from these cars, the following data is offered for consideration: The car which covers the Atlantic Division takes care of 400 requisitions per month, the Ontario Division car 600, and the one running over the Lake Superior and Eastern Divisions 550. These figures are based on the monthly average for 1906—say 1,500 requisitions are filled from the cars monthly. What would this mean if these orders were filled from the general storehouse—1,500 way-bills and the same number of advice notes, and possibly double the number of packages, such as boxes, barrels, and bundles, with a like number of tags properly addressed. Then again, there is the double handling if this class of shipments are made through the storehouse in order to get the thousand and one small packages into the properly routed ordinary freight cars which are daily being loaded for the various divisions; couple with this condition the opportunity offered for losses apart from the delays in delivery and you have a fair idea of the advantages the supply cars offer in the disbursing of this class of material over the storehouse shipments. Not alone does the economy attached to this part of the service affect the stores, all other departments served by the cars are in a more or less measure equally affected and considered.

Again there is a further field of usefulness which we find of value, in transferring obsolete or surplus material from the small roundhouses and car repairing yards on the various routings of the cars to headquarters, and that is the delivery to the supply car men of lists of such obsolete or surplus material on hand at certain points on his run, and which he together with the car or locomotive foreman check over and turn into the car. These lists are made up from the store inspector's reports and consist in the main of small but valuable material which it is considered in the company's interest to ship in the supply car rather than by the ordinary freight. This feature, together with the return of old, worn-out material which the cars also bring in, make use of them both ways, which is a detail to be watched where the light haulage of a car as on our line is to be seriously considered. The cars are as a rule attached to way freight, though on some of the more sparsely settled districts they are put on through freights, but never on regular passenger trains. The men in charge advise the office daily as to their movements.

F. A. Lee has been appointed acting Roadmaster Montreal Terminals, G.T.R.

A daily fast freight service has been inaugurated between Montreal and Quebec and intermediate points by the Canadian Northern Quebec and Quebec & Lake St. John Railways, via Riviere a Pierre Jct. Leaving Montreal 8.00 p.m., arriving Quebec 8.00 a.m.; and leaving Quebec 7.30 p.m., arriving Montreal 7.30 a.m. These trains also handle through cars to and from Joliette, Shawinigan Falls, Grand Mere, Hervey Jct., La Tuque, Chicoutimi, etc.

ELECTRIC RAILWAYS.

Projects, Construction and Betterments.

The Berlin and Bridgeport Electric Street Ry. is owned by the B. and B.E.S. Ry. Co., Limited, but was operated by the Berlin and Waterloo Street Ry. Co. Its standing is not affected by the taking over of the B. and W. S. R. by the Berlin Town Council. It is being operated by the company, power, etc., being rented from the town. Its franchise has yet 15 years to run.

British Columbia Electric Ry.—Before a decision is finally reached as to the construction of the proposed electric railway to Chilliwack, the company has asked the New Westminster, B.C., City Council for a right of way from the steel bridge to the station at the corner of Eighth and Front streets. (April, pg. 271.)

Cape Breton Electric Co.—Construction is expected to be started immediately on the company's new transmission line from Sydney to North Sydney, N.S. The company owns the electric railway as well the power and electric light services.

Chatham, Wallaceburg and Lake Erie Electric Ry.—M. Campbell and C. Hadley, Chatham, Ont., who went to Towanda, Pa., to interview the interests controlling the company, were informed June 3 that the $30,000 of bonds having been taken up locally the work of extending the line to the lake would be gone on with this summer. (Mar., pg. 189.)

Dunnville, Wellandport and Beamsville Electric Ry.—Application is being made to the municipalities interested to grant franchises for the construction and operation of this projected electric railway. The plans contemplate the construction of a line 40 miles in length, from Port Maitland to Beamsville, Ont., the main line passing through Dunnville, Attercliffe, Wellandport, Bismarck, St. Ann's and Spring Creek. A branch line is also projected to Fonthill, passing through Boyle, Fenwick, Pelham Centre, and Ridgeville.

Edmonton, Alta.—The first spike in the Edmonton electric railway track, which is being constructed by the city council, was driven, June 15, by the Mayor.

Grand Valley Ry.—M. A. Verner, of Pittsburg, Pa., representing the purchasers of the line, together with the Brantford Street Ry., and the Woodstock, Thames Valley and Ingersoll Electric Ry., stated in Brantford June 5 that the amalgamated company would proceed at once to construct a line to connect the existing G.V. Ry. with the W. T. V. and I. Ry., would extend the latter to London, and construct a line from Brantford to Port Dover, Ont. (June, pg. 427.)

Moncton, N.B.—A resolution was passed June 4, appointing the city council as a body a committee to take steps to aid and encourage the building of a street railway in the city. (April, pg. 271.)

Montreal Park and Island Ry.—The by-law of Aug. 4, 1902, granting the right to establish a tramway in the parish of Longue Pointe, was approved at the last session of the Quebec Legislature, by the act incorporating the municipality of the parish as a town.

Montreal and Southern Counties Ry.—Application is being made to the Montreal City Council for permission to construct a line on three or four streets in order to reach the vicinity of McGill st. The law department advised the council that the company had the necessary powers to enter Montreal, but required permission to utilize certain streets. A by-law was in preparation and was discussed at a meeting of the council June 24. (June, pg. 429.)

Ottawa Electric Ry.—The Ottawa City Council committee on street railway extensions was informed June 12 that the company would construct a line from Albert St., up Preston St. to the Experimental Farm, and traversing Dalhousie St. from north to south. Some other extensions were discussed, but the company's officials stated that the difficulties in the way of obtaining rails prevented anything further being done. (Mar., pg. 191.)

Quebec and Saguenay Ry.—Reports in Quebec state that an early start is to be made with the construction of this projected railway from Cap Tourmente to Murray Bay. (Jan., pg. 45.)

Quebec Ry., Light and Power Co.—A line is being constructed from Beaupre, Que., on the Q. Ry., L. and P. Co.'s Montmorency Division to High Falls, a distance of about three miles, by the Ste. Anne Power Co., to connect its mill on the Ste. Anne River with the existing railway, and will be used for the conveyance of freight only. The line will be operated by the Q. Ry., L. and P. Co. E. Conway, Quebec, is the contractor.

The equipment for the new power plant at the Natural Steps, Montmorency Falls, is being delivered at Quebec by the Canadian Westinghouse Co., Hamilton, Ont. (April, pg. 271.)

Suburban Tramway and Power Co.—The act respecting the town of Longue Pointe, passed last session of the Quebec Legislature, among other things confirmed a by-law passed Sept. 6, 1904, and duly approved by the taxpayers and the Lieutenant-Governor, authorizing the S.T. and P. Co. to establish a system of tramways in the municipality. Sec. 16 of the act provides that the company, which has built and operates a tramway in the municipality of the parish of Longue Pointe from its western boundary to the property of P. Bernard, is confirmed in the possession and enjoyment of the right-of-way for a double track granted by the corporation by by-law, and it is declared that the company shall enjoy all the rights and privileges set forth, provided the indemnity determined upon mutually or by arbitration shall be paid to the expropriated parties according to the Quebec Railway Act. It is also provided that the present conditions relating to the establishment and operation of the tramway may be modified by agreement between the company and the municipality.

Toronto and York Radial Ry.—The Ontario Railway and Municipal Board's engineer having inspected the extension from Newmarket to Jackson's Point, Ont., a regular service was put in operation June 1. (June, pg. 429.)

Windsor and Tecumseh Electric Ry.—This electric railway, which is owned by the Sandwich, Windsor and Amherstburg Ry., has been completed, and application was made June 11 to the Ontario Railway and Municipal Board for an order permitting the line to be operated. (April, pg. 273.)

Winnipeg Electric Street Ry.—A letter to the Winnipeg Board of Control, June 1, set forth that the company was willing to go ahead at once with the double-tracking of the line on Portage Ave., from Nella st. west, the Belt line and William Ave. The Board decided that the whole question of double-tracking should be taken up at a conference which it was decided to hold the following week. Plans of what the company proposed to do were subsequently considered by the Board of Works and the following approved: On Higgins Ave. from Austin St. to Point Douglas Ave., subject to the condition that the company change the plan at the bends at Curtis and Meade Sts., if required to do so by the city, in the event of the city straightening out this street. (June, pg. 429.)

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Electric Ry. Finance Meetings, Etc.

Berlin and Waterloo Street Ry.—The Berlin, Ont., Town Council, having taken over the B. and W. S. Ry., has had to interview the Waterloo Town Council respecting the use of the town's streets. The Waterloo council asks for the carrying out of considerable improvements in the road-bed, and 5% on the gross receipts up to $25,000, and 1% for each $5,000 additional. The Berlin council considers this too high, and has appealed to the Ontario Railway and Municipal Board.

Grand Valley Ry.—The Board of Railway Commissioners will be asked July 3 to recommend the Governor-General-in-Council to sanction agreements made between the G.V. Ry., the Brantford Street Ry., and the Woodstock, Thames Valley and Ingersoll Ry., or either of them for purchasing, leasing or amalgamating with either of them or their properties, or any of them by the G.V. Ry. Co.

M. A. Verner, of Pittsburg, Pa., representing the purchasers, was in Brantford, June 5, to close up the transaction. The amount involved in the transfer and in the extensions contemplated, is $4,000,000. J. S. Clark, ex-President of the G.V. Ry., is seeking to restrain the company, and its directors, from selling the line. The writ contains allegations against the directors, or some of them, of having fraudulently procured in their own names a large number of bonds and shares, and by such means obtained control of the company, that they have secured benefits to themselves to the prejudice of other shareholders, and that they have incurred large liabilities for purposes and objects of their own; that they have arranged to sell the line for personal gain, the knowledge of which has been withheld from the other shareholders and bondholders; and that they have conspired together to deceive the other shareholders and bondholders. A categorical denial is given to the whole of the charges on behalf of the directors: W. S. Dinnick, A. J. Pattison, E. T. Fox, J. J. Warren, J. S. King, J. Firstbrook, of Toronto; W. R. Turnbull and J. G. Wallace, of Woodstock, Ont.

A special meeting of the shareholders was held at Brantford, June 24, for the purpose of authorizing the issue of bonds to the extent of $30,000 a mile in accordance with the terms of the company's act, to authorize the execution of the necessary mortgage and to approve of agreements for the amalgamation of the Brantford Street Ry., and the Woodstock, Thames Valley and Ingersoll Electric Ry., or either of them, with the G.V. Ry.

Halifax Electric Tramway Co.—Railway receipts for May, $13,039.47, against $12,-251.81 for May, 1906.

Levis County Ry.—A copy of the deed of mortgage and conveyance from the Levis County Ry., to the National Trust Co., trustee for the bondholders, dated May 29, has been filed with the Provincial Secretary at Quebec. W. G. Talbot, Montreal, is Secretary-Treasurer of the company.

Montreal Street Ry.—Passenger earnings for May, $291,640.38; total earnings, $295,-951.89; against $259,951.31 passenger and $264,272.35, total for May 1906. Operating expenses, $170,495.51; rent leased lines, $339.96; city percentage on earnings, $22,-614.22; interest on bonds and loans, $12,-371.56; contingent for renewals, $14,306.94; surplus, $75,823.70; against $149,073.96 operating expenses; $18,315.52 city percentage on earnings, $15,707.84 interest on bonds and loans, $13,212.62 contingent for renewals, and $67,942.41 surplus for May, 1906. Rental of leased lines is an extra charge in the current year's accounts. Gross earnings for eight months ended May 31, $2,169,635.64; operating expenses, $1,410-567.55; fixed charges, $333,828.66; surplus, $425,239.43; against $1,906,190.04 gross earnings, $1,214,358.54 operating expenses, $266,974.57 fixed charges, and $424,856.93 surplus for the same period 1905-06.

Ottawa Electric Ry.—An offer is reported to have been made by a U.S. syndicate for the franchises, etc., of the company, but the shareholders show no evidence of any desire to sell. The Ontario Court of Appeal has decided that the storage battery which the company installed is exempt from taxation. The city council had placed an assessment of $4,000 on it.

Sherbrooke Street Ry.—Application was made to the Sherbrooke, Que., City Council recently in connection with the proposed amalgamation of the Street Ry. and the Power, Light and Heat Companies, for an extension of franchise, but it was refused. The company proposed to give a 5% reduction in rates, and to supply 500 hp. of energy at cost.

Woodstock Ry., Light and Power Co.—A company with this title, which has power among other things to construct an electric railway, has purchased the electric light plant and other property at Woodstock, N.B., from Hon. H. A. Connell.

St. John, N.B., Railway Report.

Following are extracts from the report for the year ended April 30, presented at the annual meeting June 12. The year's business showed a net profit after providing for interest on bonds and all other charges of $51,342.87, out of which two half-yearly dividends of 3%, amounting to $48,000, were declared, leaving a balance of $3,-342.87, which has been transferred to profit and loss account. While the gross earnings of the street railway part of the system shows a satisfactory increase, the net earnings are less than last year, caused by the increased expenditure necessary to maintain the service in the highest possible efficiency, and to give a car service that would meet the requirements of the public. The company's efforts in this direction have met with general approbation. The road-bed, rolling stock, power station and equipment have been maintained in a high state of efficiency. The popularity of the company's seaside park was further demonstrated during the past year. The company has extended its street railway system to St. John West, and is erecting a trestle along Rodney Wharf so that cars can connect with the city ferry system. The caving in of Union St., caused by the dredging operations in connection with the new docks, has delayed completion of the loop on the south side of Carleton, and also prevents making the necessary connections to operate cars on Rodney Wharf. During the past year six closed and twelve open cars, also one nose plow and one sweeper were purchased. Car sheds have been built in St. John West, and improvements in the power house completed. The City Council has just granted permission to double-track the railway system from the head of King St., around by Haymarket Square, through Paradise Row to Mill St. While the company cannot expect any increased revenue from this work it will give additional accommodation to the public and enable it to give a service in that part of the system equal to the other lines. The company has been negotiating with the Government respecting the building of a new bridge at the Falls and has been assured that it will be shortly constructed. When this is completed it will be able to give an efficient service from the east side to all parts of the west side, and through express cars can be run from King St. to St. John West and Fairville. The profits of the street railway system are small as compared with other cities of the same size as St. John. The city of St. John being compactly built and the grades steep, only small cars can be used. If large cars could be operated a less number of motormen and conductors would be required.

After referring to the company's gas plant and incandescent lighting and power plant the report proceeded: "We regret to report that at the last session of the Legislature, the city of St. John presented a bill to the Legislature respecting the putting down of new permanent pavements in the streets. This bill provided that on streets where our railway ran the Council could compel us to put down permanent pavements from curb to curb. This was an attempt to interfere with our charter rights, as under our charter we are only liable to keep in repair streets under 60 ft. in width where a double track is laid, and for 18 in. outside the rail on all other streets. We are glad to be able to report that on this matter the Legislature unanimously refused to consent to the City's Bill and the Attorney-General laid down the principle, which was supported by the leader of the Opposition and all the members of the Legislature, namely, that our charter rights would not be interfered with by the Legislature in future. We are sure the investing public will be glad to learn that such correct principles have been adopted by our Legislature. It would strike at the root of the highest principles of legislation if charter rights of companies could be interfered with or taken away without compensation. We recognize that we owe a duty to the public of providing a first-class service in all the departments of our business at a fair price. On the other hand, we take the ground that we are entitled to fair and consistent treatment, and that our shareholders and bondholders should be protected against any encroachment on our vested interests.

"It will be necessary to issue $300,000 of bonds, and we would recommend that these be issued in denominations of $100 and $500, payable in 20 years, on May 1, 1927, bearing interest at 5%. Our Legislature has authorized the issuing of these bonds, and provided that they shall be a charge on the real and personal property of the company, after the bonds now outstanding. We recommend that our shareholders have the prior right to take up these bonds at par, bonds not so taken to be offered to the public at a premium. Our present issue of bonds are selling at a substantial premium."

ASSETS.

Cost of property	$1,793,082 75
Accounts receivable	40,186 19
Stores	22,208 51
Cash on hand	1,000 00
Cash in bank	9,454 27
	$1,865,931 72

LIABILITIES.

Capital stock	$ 800,000 00
Bonds	700,000 00
Accounts payable	40,178 32
Notes payable	150,000 00
Dividend payable June 12	24,000 00
Outstanding tickets	1,281 33
Contingent and depreciation	48,951 76
Profit and loss	97,520 31
Suspense account	4,000 00
	$1,865,931 72

INCOME ACCOUNT.

Profits for the year after providing for interest on bonds and all charges		$ 51,342 87
Dividends paid	$48,000 00	
Transferred to profit and loss	3,342 87	
		$ 51,342 87

The officers and directors for the current years are: James Ross, President; Vice-President, Hugh H. McLean; other directors: R. B. Emerson, James Manchester, J. J. Tucker, W. Downie, M. Neilson, H. B. Robinson.

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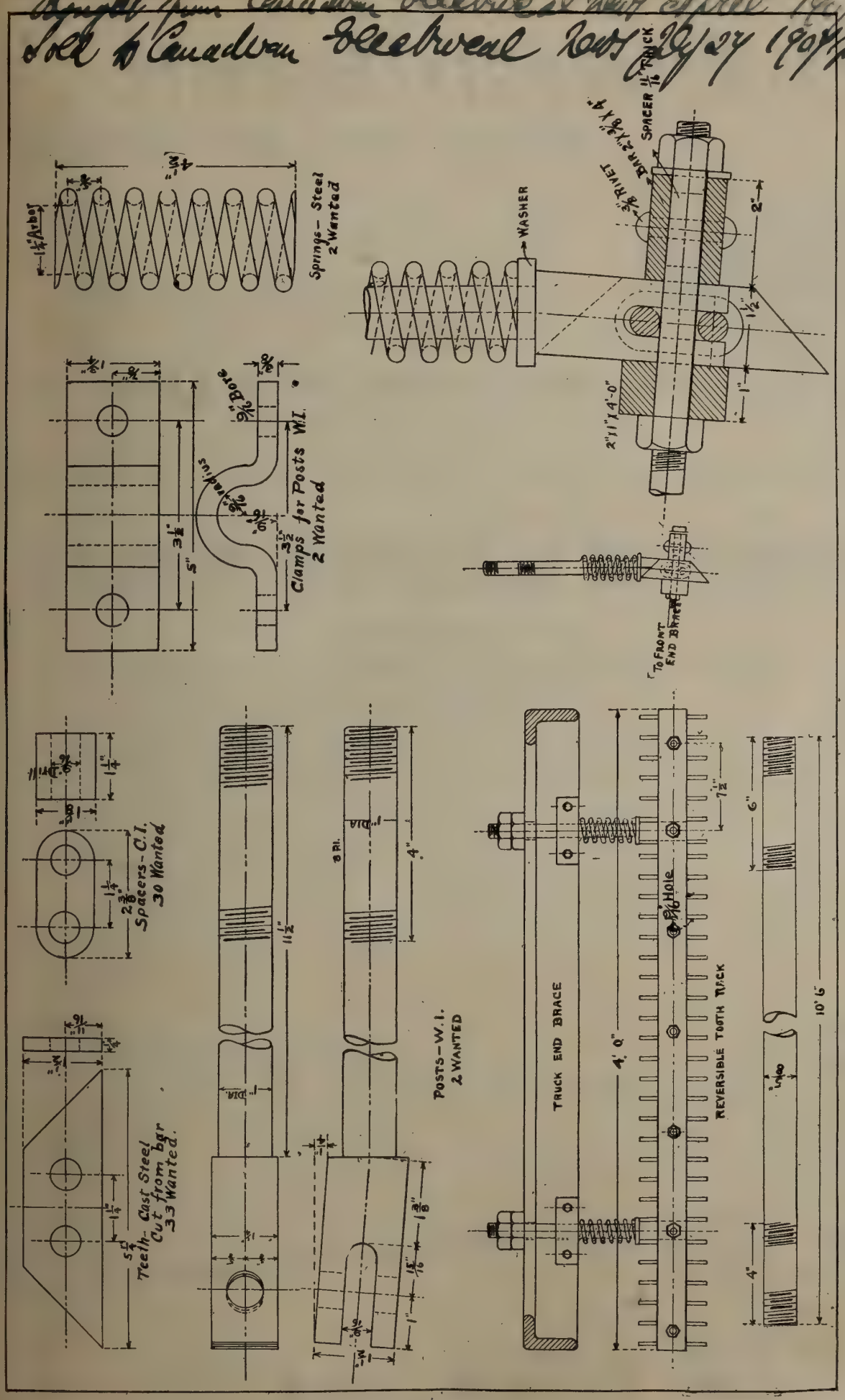

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The Montreal Street Ry. has used successfully for three years a home-made ice and snow cutter which is attached to cars and is intended to keep ice and snow from packing in the track. Above are reproduced the working drawings for a cutter as adapted to the company's standard double-trucks, but the device can be used on any kind of single or double-truck. The teeth are cut from steel bars and last a season or more. The practice in Montreal is to have a sufficient number of cars equipped with the cutter from Nov. to April, to insure that one of these devices will pass over all main lines every 20 or 30 minutes; that is, there is one cutter to every three or four miles of track according to conditions of street traffic. The device is intended not so much to shave down ice that has been allowed to form, as to prevent its formation by keeping the surface continually broken. The company does not find the use of the cutter necessary on branch lines where the street traffic is light, because the snow between rails is rarely packed sufficiently to encourage formation of ice between rails. The principal points to be observed in order to have the most satisfactory results are: First—Keep all cutters adjusted to a standard height above rail. Second—Attachment to truck should be made at random in order that teeth on different cars will not all gage into the same furrows. Third—Adjustment of distance from rail should be made periodically with the help of a straight-edge 2½ ins. or 3 ins. wide, set across the rails under the teeth. No picking of ice has been necessary on the Montreal lines since the cutters were put into service, and the roadway between the rails is kept perfectly smooth and level at a uniform height above the rail. This is a very important factor in the operation of sweepers or plows.

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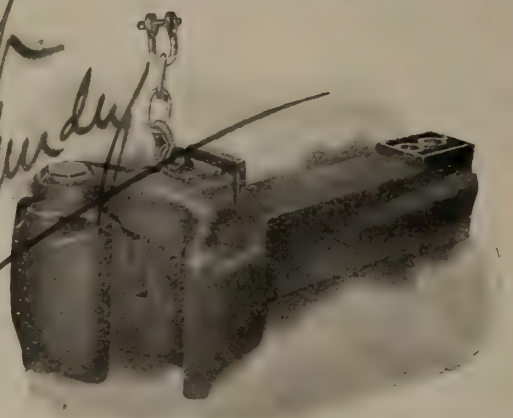

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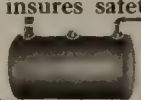

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Canadian Street Railway Association.

The annual meeting was held at Windsor, Ont., June 14, the following companies being represented by the officials named: International Ry., N. P. Baker, Superintendent, Niagara Falls; G. Chambers, General Agent, Buffalo, N.Y.; London St. Ry. Co., C. B. King, Manager; Montreal Park and Island Ry., Montreal St. Ry., Montreal Terminal Ry., P. Dubee, Secretary; Niagara, St. Catharines and Toronto Ry., G. B. Burson, Local Solicitor; Ottawa Electric Ry., J. E. Hutchison, Superintendent; Sandwich, Windsor and Amherstburg Ry., Windsor and Tecumseh Ry., J. Anderson, Manager; Toronto and York Radial Ry., W. H. Moore, Manager; F. P. Livingstone, Traffic Manager; Toronto Ry., W. H. Moore, Assistant to President; A. M. Grantham, Superintendent of Construction and Purchasing Agent; W. H. Nix, Chief Roadmaster; Toronto Suburban Ry., A. H. Royce, President; J. H. Cornish, Engineer. There were also present J. E. Rothery, General Manager East Liverpool, Ohio, Power, Light and Traction Co.; Acton Burrows, Managing Director RAILWAY AND MARINE WORLD. W. Moore, President, occupied the chair.

The reports of the Executive Committee and the Secretary-Treasurer dealt with a number of important matters, particularly the legislation affecting electric railway interests passed at the last session of the Ontario Legislature and the proceedings of the Ontario Railway and Municipal Board. Papers were read on the standardization of electric railway equipment by C. B. King, and on electric railway development in Ontario and Quebec, by R. J. Clark and P. Dubee. The reports and papers were very fully discussed, the entire day being devoted to them.

In the evening the members of the Association, on the invitation of J. Anderson, Manager Sandwich, Windsor and Amherstburg Ry., and accompanied by several prominent Windsor citizens and officials of the Detroit United Railway Co., which owns the S.,W. & A. Ry., went by special car from Windsor to Amherstburg and dined in the pavilion on Bois Blanc Island in the Detroit River, a charming outing spot which is a favorite rendezvous for Detroit and Windsor people. There were a number of interesting speeches, several public men from the Windsor and Amherstburg districts testifying to the excellent work and satisfactory service of the S. W. & A. Ry. and to Mr. Anderson's efficiency.

On June 15 the meeting was centred in Detroit, when a paper by H. A. Burson on the polyphase induction motor was read.

J. Kerwin, Superintendent of Tracks, Detroit United Ry., gave an interesting address on track construction, which was very fully discussed by Messrs. Grantham, Hutchison and others.

Officers for the current year were elected as follows: President, E. A. Evans, General Manager Quebec Ry., Light and Power Co.; Vice-President, J. E. Hutchison, Superintendent Ottawa Electric Ry.; Executive Committee, A. M. Grantham, Superintendent of Construction and Purchasing Agent Toronto Ry.; C. B. King, Manager London St. Ry.; D. Macdonald, Manager Montreal St. Ry.; Counsel, A. H. Royce, President Toronto Suburban Ry.

After luncheon the members accompanied by H. Bullen, General Superintendent; P. Dohrman, Asst. General Superintendent; J. Kerwin, Superintendent of Tracks; E. J. Burdick, Superintendent of Motive Power, and R. Oakman, Right of Way and Real Estate Commissioner, Detroit United Railway, boarded the D.U.R. private car 7,500 and proceeded to the Harper yards, the headquarters for the track construction department of the D.U.R. city and interurban lines, where a very instructive hour was spent in looking into the systems in use. Then the party proceeded to Bingham's Lakeside Inn, on the shore of Lake St. Clair, on the Detroit and Mt. Clemens shore Line Ry., about 23 miles from Detroit and 2½ miles from Mt. Clemens. They dined here, under the chairmanship of Jas. Anderson, and spent a very enjoyable evening. The Detroit power houses were also visited.

The Polyphase Induction Motor.

By H. A. Burson, M.Sc., St. Catharines

The alternating current motor, in its different forms, has during recent years been engaging, more and more, the attention of electrical engineers. This is due to tremendous development in the application of electrical energy to commercial uses, and the centralization of power plants. The large hydro-electric or steam-driven plant, from which power is transmitted to long distances, has replaced the small isolated plants distributing power over a comparatively small territory. This has meant a more thorough study of the economical distribution of power, resulting in the adoption of alternating current generators, transformers, and the transmission of electrical energy at high voltage. The direct current motor drive has been replaced in many instances by induction motor, both in manufactories, and, to a certain extent, in electric railway work. The object of this paper is to briefly describe the characteristics and performance of the polyphase induction motor, both constant and variable speed types.

In principle the induction motor is essentially a transformer, having a much larger magnetic leakage than an ordinary static transformer. The motor consists of a stationary element, the stator, and a rotating element, the rotor. The stator corresponds to the primary of a transformer, while the rotor is a secondary. In order that the secondary may rotate, it is necessary that there be an air-gap in the magnetic circuit, which results in a large increase in the magnetic leakage. This large magnetic leakage results in giving the induction motor characteristics which are very different from those of the static transformer. The characteristics of the latter are such that the power factor continues to increase with the load, whereas in the case of the induction motor, the power factor will increase with the load to a certain point, after which it begins to decrease.

The constant speed type of an induction motor is one in which the rotor or secondary windings are short-circuited. In operation a polyphase, e.m.f., is impressed on the primary or stator windings, which produces a rotating field. This rotating field induces in the secondary or rotor an e.m.f., which, when the motor is at rest, is of the same frequency as the impressed e.m.f. The interaction between the fields due to the impressed and induced e.m.f's., is such as to induce a pull on the rotor periphery in the direction of field rotation. Hence, if free to rotate, the rotor will revolve in the direction of field rotation.

With the short-circuited secondary, the current taken at the start is heavy, owing to the induced e.m.f. in the rotor circuit being maximum. As the speed of the motor increases, however, the induced e.m.f. decreases, resulting in the corresponding decrease in the current taken from the line. The starting current taken by the ordinary motor, when thrown on full line voltage, will be from four to six times the full load current, which, in the case of a large motor, produces a very heavy draft on the line. It is therefore customary to use an auto-transformer in starting, and applying from 30 to 60% of the normal voltage to the motor, depending upon the character of the starting load.

The resistance of the rotor circuit is a most important factor in the operation of the motor, since the starting torque, the starting current, the efficient and over load capacity, are all affected by the resistance of the rotor circuit. In order to obtain a high starting torque, or low starting current, it is necessary that this resistance be high, which means a reduction in the overload capacity and efficient. In the squirrel cage motor, where the rotor resistance is a fixed quantity, it is therefore necessary that the resistance be such as to give a sufficiently high starting torque, without the undue reduction in efficient or overload capacity.

The variable speed type of motor is one in which the rotor resistance may be adjusted. The rotor windings, instead of being permanently short-circuited, are connected to collector rings, across which is an adjustable resistance. At start, this resistance is all in circuit, resulting in giving a high starting torque, with a comparatively low current. As the motor speeds up the resistance is cut out, and, when maximum speed is reached, the rotor windings are short-circuited. In this way, it is possible to obtain a motor having high starting torque, low starting current, and high efficient underload. The speed for a given load depends upon the value of the rotor resistance. In fact, the slip or percentage of reduction from maximum speed is equal to the resistance loss in the rotor, divided by the total net input into the rotor. It will therefore be seen that by varying the rotor resistance, any speed from zero to maximum may be obtained for a given load. This type of motor, therefore, lends itself to conditions requiring variable speed, such as hoists, cranes and street railway service

In this country, very little, if anything, has been done towards applying polyphase induction motors to street railway work. In Europe, however, there has been in operation for some time, the Valtellina line, which was completely equipped with cars operated by polyphase induction motors, and the results obtained have been so successful that the system has been extended, the same type of motor being used. A good description of this line may be found in the proceedings of the A.I.E.E. for 1905, in a paper by Mr. Waterman.

The chief disadvantages of the polyphase motor for traction work are the difficulties in the construction and maintenance of the over-head system, and a very small clearance between the rotor and stator. In the ordinary type of motor, this clearance will not be more than from four to five hundredths of an inch on a side. This, for traction work, necessitates the use of very heavy and massive bearings, so that the wear of the bearing may be so small as not to allow the dropping of the rotor on the stator. As regards the over-head system, two or three trolley wires are required, which, although not such a serious item for inter-urban work, would be entirely unsuitable for city work, where so many crossings are required. Engineers in this country have been working towards single phase street railway motors, and there are now in operation several lines using these motors with success. The two principal types developed are the repulsion motor and the series alternating current motor, and their relative advantages and disadvantages have been for the last two years a much discussed question. All the difficulties of operation have not as yet been overcome, but it is extremely probable that the next few years will see high speed interurban lines in this country operating the single alternating current apparatus, notwithstanding the success which polyphase traction has achieved in Europe.

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Electric Ry. Development in Ontario.

By R. J. Clark, Assistant to the Comptroller Toronto Railway.

It is customary to hear the layman state that electricity is yet in its infancy. If this is the case, it must be added that the child is precocious and rapidly maturing. Moreover, no part of the child's anatomy shows a hardier muscle, combined with greater vigor and endeavor, than the limb of electric traction. In this country of ours the progress of electric traction has been very marked, and the future holds out vast possibilities to our view—possibilities which will soon, no doubt, become probabilities—and later on—accomplished facts.

Before passing on to any historical details of the pioneer lines of Ontario, and other matters which may be of interest, it will not be amiss to give some figures showing the general growth of railways in the Dominion. In 1895, there were 21 electric railway companies with a capital of $13,035,263, operating 354½ miles of track, carrying 55,348,612 passengers. In 1898, there were 35 companies with a capital of $28,763,328, operating 635 miles of track, carrying 94,616,344 passengers. In 1901, there were 43 companies with a capital of $38,637,495, operating 672 miles of track, with gross earnings of $5,422,539. In 1905, there were 46 companies with a capital of over $50,000,000, operating 793 miles of track with gross earnings of $9,357,126, and net earnings of $3,438,931.

To show, moreover, that the even rapid increase shown above gives every sign of being continued, the following figures are given:

Year	Total Train Mileage	Passengers Carried	Freight Carried	Earnings Gross	Earnings Net
1901.....	31,750,754	120,934,656	287,926	$5,768,283	$2,333,120
1902.....	35,833,841	137,681,402	266,182	6,486,438	2,683,583
1903.....	38,023,529	155,662,812	371,286	7,233,677	2,760,819
1904.....	42,066,124	181,689,998	400,161	8,453,609	3,127,092
1905.....	45,959,101	203,467,317	510,350	9,357,126	3,438,931

Such has been the growth of electric railways in Canada, indicating a remarkable extension of systems, successful and efficient operation, and remunerative business, without disappointments in the way of setbacks.

EARNINGS AND OPERATING EXPENSES.

	1895 Gross	1895 Op. Exp.	1898 Gross	1898 Op. Exp.	1901 Gross	1901 Op. Exp.	1906 Gross	1906 Op. Exp.
Halifax.....	.....	.....	.....	.....	251,644	142,412	387,518	215,709
Ottawa.....	.....	.....	231,802	159,159	313,172	235,128	525,747	345,062
Montreal.....	1,110,000	650,000	1,450,000	760,000	1,900,680	1,105,267	3,100,487	1,850,720
Toronto.....	976,031	.....	1,210,618	578,857	1,661,017	857,612	3,109,740	1,646,515
London, 1896.....	94,194	54,171	113,812	65,665	141,846	84,557	202,912	159,428
N. S. & T.....	.....	.....	.....	.....	172,840	126,953	265,071	174,051
Winnipeg.....	.....	.....	.....	.....	831,737	427,754	1,416,305	701,964
Vancouver.....	.....	.....	187,274	.....	413,923 not stated		698,305 not stated	

PASSENGERS CARRIED.

	1895	1898	1901	1906
Halifax.....	.....	.....	3,037,268	3,783,801
Ottawa.....	.....	5,133,938	7,188,781	11,408,422
Montreal.....	26,000,000	35,000,000	46,741,660	76,356,099
Toronto.....	23,353,228	28,710,388	39,848,087	76,958,488
Hamilton.....	.....	.....	4,810,237	8,018,350
London (1896).....	2,432,416	2,841,568	3,744,469	5,502,555
N. S. & T.....	.....	.....	1,368,252	2,167,102
Winnipeg.....	.....	.....	9,504,051	17,229,554
Vancouver.....	.....	.....	7,670,468	12,395,582

The figures for Hamilton include—Hamilton St. Ry., Hamilton Radial Ry., Hamilton and Dundas Ry. The passengers carried are exclusive of transfers. The figures given for Halifax cover income from all sources.

Manifestly, it would prove an arduous task to cover the history of all the electric railways in the Dominion, consequently the committee deemed it advisable to limit this paper to a brief history of the growth of electric railways in Ontario. The people of Ontario are indebted to the late Charles Vandepoele for the installation of the first electric line in Canada, which was also the second on the American Continent. Mr. Vandepoele was a Belgian by birth, who came to America in 1869. In 1883, in the United States, he had equipped a small track 400 ft. long with a single car running thereon, operated by a 3 h.p. motor. Later in the year he constructed an overhead line for the Chicago State Fair, which remained in operation for six or seven weeks. It was in Toronto in 1884 that Mr. Vandepoele operated the first electric railway in the Dominion. Toronto had at that time a population of 100,000. In July of that year he installed the exhibition line from the foot of Strachan Avenue along the G.T.R. tracks to the eastern entrance of the Industrial Exhibition—a distance of 3,000 ft. Speaking of this line the Daily Mail of Sept. 11, 1884, described it as follows:

"The electricity, which is generated by two large-sized dynamos in Machinery Hall, run by a 75 h.p. engine, is conveyed into two copper bars which run the whole length of the track between the rails. These bars are partly covered over for protection against shock. Attached to the motor car are two pieces of metal which run along the copper bars, and the electricity is then carried to the dynamo on the cars which, when in motion, drives the car by means of a series of pulleys and belting. The electrician on the car has full control of the movements of this motor just as if he were running a marine engine or locomotive. By means of a handle he immediately reverses the motion of the dynamo on the car. To stop the car he simply breaks the current of electricity, which stops both car and motor. As showing the enormous power which the copper bars between the rails possess, it may be stated that the heavy grade behind the Machinery Hall was mounted with perfect ease by the cars."

There appears to have been a single motor car with three trailers. The car was equipped with a 30 h.p. motor, and 200 people altogether could be carried at a time. Even at this early date the street railway came in for its share of criticism, as the following extract from the Daily Mail of Sept. 10, 1884, will show: "The electric railway did not give satisfaction yesterday afternoon, and numbers of would-be passengers were turned away after having paid their fare. Something went wrong with the machinery, and the train was stopped until the patience of the visitors became exhausted. Towards evening it was again in running order, and made several trips on time."

In 1885 Mr. Vandepoele appears to have experimented with the overhead trolley. A ¼ inch wire was strung and the trolley pole is described as being arranged after the style of an old wire sweep, and was carried on top of the car, the rails being used as a return. During the last five days of that year's fair, 50,000 people were carried to and fro. This was then considered wonderful, but 20 years later the Toronto Railway Co. carried (including transfers) 250,000 passengers in a single day.

The second electric railway was the Windsor Electric Railway, where the underground conduit was used. This line was laid down in 1886 also by Mr. Vandepoele. It had been incorporated as far back as 1873, amended in 1887, and in 1891—it is interesting to note—was made perpetual. In Aug., 1901, the line was acquired by the Detroit United Ry. Co. The first attempt on this railway to operate by electricity was not successful. The breakdowns were so frequent that horses had to be kept in reserve, and in fact, electricity was finally abandoned and horses once more drew the cars. In 1891 the Sandwich, Windsor and Amherstburg Railway was electrified between Windsor and Sandwich, and in 1893 the line between Windsor and Walkerville was purchased.

In 1887 Mr. Vandepoele was able to make the proud boast that "as the matter now stands, we have more miles of electric railway in successful operation than all the electrical railways in the world combined." It only required six roads and 14¾ miles of track to verify this boast.

The third electric railway in the Dominion (also a Vandepoele) was the old Port Dalhousie, St. Catharines, and Thorold Electric St. Railway, originally a horse car line, which was converted to an electric line in 1887, the first car running on Oct. 6 of that year. The road-bed consisted of flat rails laid on longitudinal wooden stringers. The cars were about 18 ft. long—single truck—the motor being placed in the vestibule, and the armature shaft terminating in a gear, which drove a countershaft on which was mounted two large sprocket wheels, which drove corresponding sprocket wheels on the axles by means of an endless sprocket chain. The motor was controlled by a knife switch and box rheostat. The seating capacity of the cars was 12 passengers. Cars had to be turned at each end of the line. The gong instead of being placed under foot, was on top of the car with a rope hanging in a convenient place for the motorman. The trolley consisted of two no. 00 wires on a rigid suspension, the ears being inverted so that the trolley wheel ran on top of the wire. One wire was used as feed wire and the other as a return. The wheels were joined together and current was conveyed to cars through flexible cord, which fitted on a horn at the rear end. In order to pass a car at switches, or to replace the trolley when it jumped (which was often), a spear pole that fitted into the socket was provided and carried on the car. The trolley wheels on cars going in one direction had to be lifted off the wire while a car going in the opposite direction passed. On the open cars the motor was located in the centre of the car with a sprocket chain to either axle. These cars could be run in either direction, and were considered a great improvement on the closed cars. In order to prevent the magnetism of the car from stopping the passengers' watches, the front vestibule which enclosed the motor was sheeted throughout with zinc. The motors were 15 h.p.—one per car—and weighed about three-quarters of a ton.

The St. Catharines and Niagara Central Ry., now known as the Niagara, St. Catharines and Toronto Ry., was opened on July 11, 1888, as a steam road, and continued operation with a more or less frequent service until the fall of 1900, when it was converted to an electric line. The

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total earnings as a steam road for their largest year amounted to $25,000, with a net earning of $8, and that year 3,700 passengers were carried. Since its conversion into an electric road, the number of cars has increased from four to 53, and during 1906 over two millions of passengers were carried.

In Jan., 1893, the Niagara Falls Park & River Railway was commenced, the work being carried on during all the rigors of a severe winter. The route was from Queenston, around the falls and rapids to Chippewa—thus forming an electric portage from Lake Ontario to Lake Erie. The trolley wire throughout was no. 00 B.W.G. hard drawn copper supported on iron brackets. The return was by the rails, which were bonded with no. 0 B.W.G. wire, ½ in. copper rivets and cross bars every fourth rail. This road was opened May 24, 1893, and in that week as many as 17,500 passengers were carried in a single day. A correspondent of the American Electrical Engineer, who had visited the road during the first weeks of its operation, wrote: "The first thing that strikes an observer is the British solidity and massiveness of construction. The cars roll over the track as smoothly as billiard balls. A run was made last week from end to end—11½ miles—in just over 29 minutes—a speed of 24 miles per hour. The rolling stock consists of four 18 ft. ordinary box cars, ten open cars measuring 28 ft. over all, and ten observation cars, all equipped with W.P. 50 motors. Besides the above motor cars there were 18 open and closed trailer cars. The cars had 33 in. wheels, weighing 500 lbs. each with 3½ in. tread and 1¼ in. flange. The track was built with 56-lb. C.P.R. rails, with angle fish plates, laid on 8 x 6 in. cedar and tamarack ties spaced about 30 in. apart." It will be readily seen that this railway shows a very rapid development over the three pioneer lines which were previously described. The line was up-to-date, and in connection with it Niagara Falls was harnessed for the first time on the Canadian side. As the correspondent of the Electrical Engineer neatly put it: "When we turn to the roads now in operation, and especially to the magnificent road lately equipped and started by Canadian capital at Niagara Falls, we realize how crude and faulty the early work was."

In 1891 the Ottawa Electric Street Railway system was inaugurated with a capital of $1,000,000, and between 1891 and 1894 twenty-two miles of single track were laid down by Ahearn & Soper. In 1893 2,700,000 passengers were carried, and the number of cars in operation was 65. It was the first line to demonstrate the practicability of giving an uninterrupted service throughout the winter season. A clause had been inserted in the contract with the city, providing for the use of sleighs in the event of its being impossible to run electric cars. Happily the occasion for using them never came, and in 1893 the road amalgamated with the Ottawa City Passenger Ry. Co., which had been operating horse cars since 1870, and electricity was adopted throughout the whole system. To-day the company may be congratulated on having a higher percentage of net earnings than any other in Canada.

The Toronto Railway Co. was incorporated by special act of the Ontario Legislature on April 14, 1892, after the expiration of the original charter for the street railway system granted in 1861. In 1891 the city did not renew the franchise, but bought the property of the retiring company for $1,500,000; the plant and franchise were then sold to the highest bidder, and were purchased at the appraisement of arbitrators, the city making certain reservations which have ever since proved bones of contention. The group of pioneers who in 1892 incorporated the present system comprised Wm. Mackenzie, H. A. Everett, Jas. Ross and others who have since become famous, and have greatly extended their field, until they are interested in street railways from the Atlantic to the Pacific, and from Winnipeg in latitude 49, to San Paulo and Rio de Janeiro in Brazil. The franchise which was obtained consisted in the right to operate a street railway in the City of Toronto for a period of 30 years from Sept. 1, 1891. The syndicate undertook to convert the existing horse lines into electric lines as rapidly as possible, and to pay the city $800 per mile of single track per annum, and the following percentage on gross profits:

From 1 to 1,000,000	8%
From 1,000,000 to 1,500,000	10%
From 1,500,000 to 2,000,000	12%
From 2,000,000 to 3,000,000	15%
From 3,000,000 upwards	20%

This agreement, while the envy of less fortunate municipalities, has ever been the subject of much litigation, but that the city was not always in the right is now shown by the recent decision of the Privy Council, which fully substantiated the Company's interpretation of the agreement on many points at issue. To show the success which has followed the management of the Toronto Railway, it may be mentioned that during the 15 years ended Dec. 31, 1906, the company paid the city $3,440,746.17 on account of taxes, pavement, and percentage charges. During the same period, moreover, the shareholders received $3,396,512.96. It is estimated that during the coming year the company will pay into the city coffers about $500,000, and will distribute to its shareholders about $475,000. The pay roll of the company during 1906 was within $8,000 of $1,000,000.

The foregoing statistics, though they are perhaps somewhat meagre, will serve amply to show the rapid growth and development of electric railways in this country. It will serve to bear witness to the energy, ingenuity, and untiring endeavor of those who have brought the electric railway systems of Canada to their present degree of efficiency. It will also show that not only are the shareholders of the various companies gainers by the successful operation of street railways, but the municipalities along whose streets the trolley cars convey quickly and comfortably their citizens, and also it will remind the citizens themselves that by means of efficient, well-regulated, and consequently successful operation, they are able to accomplish more business, see more sights, call on more friends, and in fact do a thousand and one things which but for the trolley car would be well-nigh impossible.

The Hamilton Board of Works has instructed the city solicitor to take the necessary proceedings before the Ontario Railway and Municipal Board to compel the Hamilton Street Ry. Co. to comply with the terms of the Board's order issued in Jan.

A through electric car now runs between Leeds and Bradford, Eng., although part of the line is 4 ft. 8½ in. gauge and the other part 4 ft. The wheels accommodate themselves to the lines by means of a moving sleeve on the axles; which causes the wheels on one side of the car to slide inwards or outwards as may be desired. This idea is commended to the Toronto City Council in connection with the problem of the entrance of the suburban railways to the city. The Toronto Ry. has a gauge of 4 ft. 10⅞ in., the Toronto Suburban Ry. a gauge of 4 ft 10½ in., while the Toronto and York Radial Ry. is 4 ft. 8½ in., the standard gauge.

Electric Railway Development in Eastern Canada.

By Patrick Dubee, Secretary Montreal Street Railway Co.

The question of the introduction of cars propelled by electricity in Eastern Canada was taken up in the principal cities almost simultaneously with the various systems in the United States. The introduction of the system, however, was regarded as exceedingly doubtful, owing to the general belief that the climatic conditions were such as would prevent the successful operation of the system in the winter months. The writer remembers that when the Montreal St. Ry. Co. accepted the franchise to operate in the City of Montreal, that the majority of the shareholders sold out their holdings in the Company, and predicted that within a few years at the most the company would be bankrupt. In fact, were it not for the strong financial backing of such men as the Hon. L. J. Forget, Jas. Ross, R. B. Angus and others, it is questionable in my mind whether the same would have been carried through successfully. This incident is given in order that the members may more fully appreciate the marked difference in the climatic conditions existing between the different cities in the Dominion.

The first city in Eastern Canada to adopt the electric system was Ottawa, the first car being in operation on June 24, 1891. In the fall of the following year, electric cars were in operation in Montreal; in Sept., 1892, in St. John, N.B.; in 1896 in Halifax, and in 1897 in Quebec; and since then in Cornwall, Levis, Sherbrooke, Yarmouth, etc.

The progress of the electric system in Eastern Canada, when the difficulties and the large expense to be met in operating in the winter months is considered, has been very satisfactory, as can be seen by the following statement:

	1892	1906
Miles of single track	92	351
Passengers carried	28,392,450	103,232,140
Gross earnings	$ 860,000.00	$5,578,494.00
Capital invested	$4,000,000.00	$22,782,133 00

In considering these figures, it is important to bear in mind, that there are practically no suburban lines in Eastern Canada, and that there are only four cities of a population of over the 50,000 mark, and 12 cities in which electric cars are in service.

The success of the electric railway system is due to the fact, that the different companies succeeded in keeping in operation and maintaining a good service during the winter months, although the climatic conditions are so adverse to it. During the first two winters, it was doubted whether success would crown their efforts. Much interesting literature could be written describing the serious difficulties, the intense anxiety, and the hardships experienced by the managements of roads and their faithful assistants in their mighty battles with the elements in order to maintain the service. The snow-fighting equipments in the early days were not as competent to do their work as to-day, but now the improved sweeper with its standard equipments, the snow-plough and salt cars, together with the heavier cars in use, materially assist in making the work easier for the men, and it is seldom that the service is affected, no matter how serious the storm. To give the members an idea of the volume of snow which falls during the course of a year, it is only necessary to mention that statistics kept at McGill University show that the average yearly snowfall for the last 15 years was 117 inches. It will also be of interest to know that the average cost of operation in winter for the last 10 years on the Montreal St. Ry. system has been about 70% against about 52% during the summer for the same period. Other factors which have assisted in making the electric system so successful

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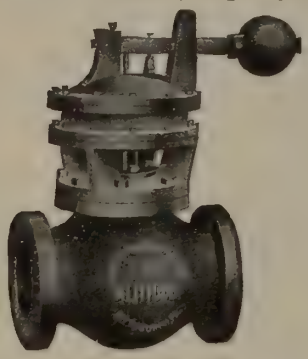

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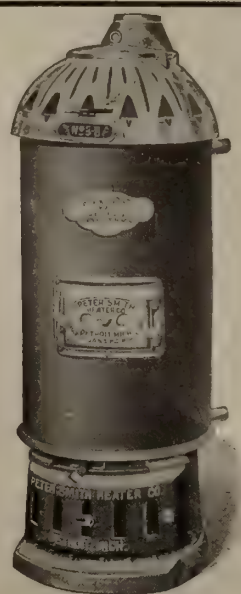

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have been the great improvements made in the road-bed and track construction, rolling stock, and supply of electric current, as may be readily seen in the following brief resume:

The rails for the most part as originally laid on the system, when the method of propulsion was changed from horse to electric power, were 72-lb. girder per yard, laid both in macadam and paved streets; on macadam streets the foundation was wooden ties, packed up with 2 in. broken stones; in paved streets the rails were laid on wooden ties and concrete foundations. The present rail is 87 lbs. per yard, T section, and laid in paved streets with tie rods and steel ties, the groove for the flange of the wheels being cut out of the blocks, making less noise in operation than the grooved rail, and a better surface. The rail is well surfaced with concrete stringers. The 87-lb. T rail in macadam is laid on well-spaced wooden ties, and with the tie rods every 6 ft., and well surfaced and packed with good clean macadam. On hills and in some locations 96-lb. girder rail is used, but T rail is used wherever practicable. Intersection work is now made of the best manganese steel, and switches, crosses, diamonds are now all of one piece, instead of built-up work, or insert pieces as formerly.

With the arrival of electric traction, there was an immediate tendency towards larger cars, but progress in this direction was hindered by the necessity of laying a more substantial rail and road-bed. The simple truck car was fully developed in 1897; after that came the double truck car, first with longitudinal seats, and then with cross seats, after the fashion of steam railway coaches. Sizes and weights increased rapidly, until now, in 1907, the average car being built measures 50 ft. over all, and weighs about 40 to 50 tons. A few comparisons showing changes in the last 10 years are interesting:

	1897	1907
Length of body	21	35 ft.
Length over all	30	50 ft.
Motor equipment	60	180 h.p.
Seating capacity	28	50
Weight empty	16,000	50,000 lbs.
Weight per passenger	570	1,000 lbs.
Cost	$2,500.00	$6.000.00

It will be noticed that, 1st, the deadweight of car per passenger seat has almost doubled. This would indicate a very large increase in the amount of power consumed, also in the wear and tear of equipment and road-bed per passenger. To offset these items, there has been a decrease in the amount of platform labor required. The latter influence seems to have overshadowed all others in later developments on account of the great increase in the cost of labor during the last decade. There is no doubt that low cost of power and maintenance have been more or less sacrificed to permanency of construction and limitation of pay-rolls. 2nd, that although there has been a very great advance in the standards of comfort, durability, elegance, and continuity of service, there has not been a very great increase in the cost of cars per seated passenger.

One of the most important developments in the car equipments has been in the method of braking. All modern cars weighing over 30,000 lbs. are equipped with power brakes, operated by air or other means. The severe braking requirements of modern practice, when cars are operated at a high rate of speed, can easily be attested, and the wonderful success attained by these brakes is too well known to be further commented on.

The development of motor equipment has been along the lines of increased efficiency, certainty of operation, and refinement of construction, both electrical and mechanical. The main principles of design have not changed to any extent, but the results obtained have materially added to the comfort of passengers.

With regard to the all-important factor of the supply of electric current it is only necessary to say that to-day it is rather seldom that the service is interrupted for want of power. This has been accomplished at a great expense by the use of improved machinery in power houses and close attention to the overhead work.

Standardization of Electric Railway Equipment.

By C. B. King, Manager London, Ont., Street Ry.

The word "standard," like the word "arbitration," the expression "municipal ownership," and some others, has a very peculiar and subtle effect upon one, especially when an effort is made by a travelling salesman, a labor agitator or a politician to be captivating. When we hear the word "standard," the impression is immediately conveyed that the most nearly perfect has been obtained and that there need be no further argument. But as perfection is impossible, complete standardization is likewise impossible from the fact that about the time we adopt a standard, an improvement is made which we must adopt, and so we lose our standard. There are, however, certain elements, consisting almost entirely of dimensions, in our present electric railway equipments, which can be successfully standardized, for the reason that so many similar parts of so nearly the same sizes have been in use so long that our experience has shown that one set of dimensions can be selected that would suit all. It is to this class of standardizing that my interest inclines, and to which I beg to call your attention. A great deal in this line has already been done by the Master Car Builders' Association, and by the American Society of Civil Engineers, which has been of benefit to electric railways, and which I think we should follow where possible or point out some good reason why we should not. Similar organizations to the Canadian Street Railway Association, such as the American Street and Interurban Railway Association, the New York Street Railway Association, and the Central States Electric Railway Association have also done something, the most thorough and effective work having been done by the latter Association.

The M.C.B. Association was impelled to determine upon its well-known standards because of their interchange of cars and the necessity of one road repairing cars belonging to another. Electric railways hardly need it for this reason now, but they will soon, because of the development of interurban lines and their several connections. But I think we have a reason which is very similar to that which caused the A.S.C.E. to determine upon rail sections, and that is, that we are getting so many motors of different designs which must be kept in repair. Each design has its own particular gear, pinion, bearings, etc., and so we must add to our stock of supplies, and thereby add to our storeroom difficulties. In order to at least reduce these difficulties, I beg to suggest that we classify motors and adopt standard designs for all the wearing parts possible. Electric railways are connecting, to an increasing extent, with steam railways, and so I think electric railway associations should adopt the M.C.B. standards as far as possible. The electric railway associations have enough to do to establish standards for the electric equipment, which, if they do their work well, will in turn be adopted by the M.C.B. Association when the steam railways adopt electric operation.

The Central States Electric Railway Association appointed a committee last September to recommend standards for various parts, and at its meeting last month, it reported upon the subjects of rails, wheels, journals, journal boxes, axles and brake shoes. I believe it is to yet report upon various other parts. As you have no doubt read the reports, as recently published in the journals, I will only review, with perhaps some criticisms, what it has suggested.

Its adoption of the 70-lb. American Society standard rail for interurban work is all right for the present, but I have no doubt that the time will come when it will consider this rail too light, when, of course, it can adopt the next size, or the 80-lb. American Society standard. Its adoption of a 7 in. high T rail for city work suits its local conditions, for most of the cities in that territory permit the use of T rail. However, I think a girder groove rail and a guard rail should be standardized, so that the repairing and replacing of track work will not be so troublesome and expensive as it is at present, when we find it very difficult to get rails of the same section as we may have in use at present. Two other things about track work, which might be standardized to advantage, are the tongue switch pieces and the frogs in the special work. As tongue switch pieces having a radius of either 100 or 150 ft. are suitable for the beginning of curves of almost any radius, it would be a great advantage in the replacing of these parts if the radius of the tongue switch piece and its length were standardized, and so made by the manufacturers. The tongues should also be of the standard length, so that they will be interchangeable. In the frogs, the length of the arms is about the only thing that could be standardized, but even this would be of some advantage, for then we should know that a frog made for a 50 ft. radius curve would fit at any intersection where there is a 50 ft. radius curve, without regard to the length of the arms.

One more thing which I have in mind regarding track work, is that of paving block. Those of you who have had any experience with this kind of paving must have found how troublesome it is to do any patching if the old bricks are broken to any extent when track repairs have to be made, and you find the new block which you have, to be of a different size. I am a believer in large paving blocks, for the reason that these blocks wear at the edges first, and therefore the less number of edges, the less will be the wear. I would suggest that a paving block 4 in. thick, 6 in. wide, and 12⅛ in. long, would be a very good one for track work; the 4 in. in depth being enough to give it body, and being just about the right thickness for paving over ties with a 6 in. rail. The 6 in. in width would give a good broad wearing surface, while the 12⅛ in. in length would be just right for fitting with two blocks laid sideways, if it should at any time be desired to lay them this way.

Coming back, for a moment, to the subject of rails, I have often thought that a good method of standardizing rails might be to adopt such rails as the American Society standards for all work in the country, in unpaved streets or roadways, and then to use this same rail in the paved streets or roadways by making what might be termed a compound rail, consisting of an upper section of the ordinary A. S. standard rail, and of a lower section consisting of a specially rolled eye-beam, very much like the Carnegie steel tie, having an upper flange of 4⅝ ins., which is the same as the base of the 70-lb. rail, a lower flange of about 6 in. wide, and a height of about 5 ins.

These two sections would be held together, at frequent intervals, by rolled steel clamps, bolted through the webs. By laying the two sections so that the joints of the upper section and the joints of the lower section would not come together, a very good form of continuous rail would be obtained, which would yet have sufficient joints to allow for the necessary contraction and expansion. Where a groove section rail is required, a very light guard could be rolled and bolted to the inside of the

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ordinary T rail. If it were desired to use a regularly rolled girder groove rail, one very similar to the Loraine Steel Co.'s section 80, No. 337, could be used and clamped to the lower section just as well. This method of construction would save ties, because a less number of ties would be necessary, and as the ties could be buried deeper in the foundation of concrete or otherwise if desired, the road-bed should stand the wear better than when light rail is used and the ties are laid close under the pavement, and then when it became necessary to renew the rails, because of wear, only the upper section would have to be replaced. This would be particularly advantageous in special work at curves and intersections, for the reason that they wear so much more rapidly than rail on straight track. The amount of material used in the replacements would then be reduced to a minimum. The depth of the upper section, 4⅝ in., would still be sufficient to use the hard steel centres or the solid manganese pieces, as might be desired. All of these pieces, for special work, should have a section of a standard design, so that no matter what manufacturer they might be obtained from, the one would fit with the other, using the same kind of fish plates, or splice bars. This kind of track would, of course, cost from 25 to 50% more, but I believe that, in the course of 10 to 15 years' wear and repair, the benefits to be derived would greatly repay this difference.

With regard to the truck parts which might be standardized, I hope you will agree with the suggestion that as far as possible, the M.C.B. standards be adopted to all those parts of the truck not influenced by the electric equipment. We cannot, of course, adopt the M.C.B. wheel, and so I think the one selected by the Central States Association to be the wheel which is about correct, being not too large for city work, and yet plenty large enough for interurban work. It has adopted the M.C.B. journals, making some of them smaller, of course, than those actually used by the Master Car Builders, but yet of the same design. It has adopted a brake shoe very similar to the M.C.B. design, and until I learn the reason for not adopting the regular M.C.B. design, I think the latter should be adopted, but, of course, the M.C.B. design would have to be modified to suit the smaller wheel, and if this is the only difference, the shoe it has adopted will, of course, be all right. The axles which it has adopted seem to be for heavier work than we are accustomed to in ordinary street railway work; however, I believe it might pay to adopt these heavier axles, even for light street car work, for there is no doubt that some breakage would be saved by doing so. I find very little reason for adopting the standard journal box, except in order that it may contain the standard journal, as the journal box itself wears very little, and is therefore not subject to frequent replacing.

When it comes to standardizing certain parts of the electrical equipment of cars, some difficulty may be encountered, for the reason that the two or three large manufacturers of railway equipment may want to maintain their individuality in certain details. However, as it is only the wearing parts which I propose to standardize, and such parts as are now so nearly alike, I do not see that this difficulty should be considered insurmountable. My desire for standardizing these parts, is not so much that we may all use the same thing, as it is to make these wearing parts interchangeable between motors of different design, but of about the same size, and to this end I would suggest that those wearing parts be designed for three different sized motors, of 50, 75 and 100 h.p. sizes respectively. Motors ranging in horse power under 50, would then be designed to use those wearing parts which would be just large enough for a 50 h.p. motor. Those motors rated between 50 and 75 h.p. would use wearing parts just large enough for 75 h.p. motors, but which, I think, would not be too large for anything between 60 and 75. I make the 50 h.p. class the smallest, for the reason that no modern street railway motors are now built of less than 35 h.p., and I take it that the gears, pinions and bearings of a 50 h.p. motor would not be objectionably large for a 35 h.p. motor. Gears and pinions, beside being classed into 50, 75 and 100 h.p. sizes, would have to be also classed according to gear ratio desired. Axle and armature bearings, however, could be simply classed into 50, 75 and 100 h.p. sizes, the motor frames being bored out for these respective sizes, and then if it might be desired to use a 50 h.p. motor in a two motor equipment on a truck having a smaller axle, the only difference would be in the cast iron shell of the babbitt-lined bearing, and the change could be readily made. Standardizing of motor parts might be carried even further to commutators and brushes, which, however, would require the same number of coils in the armature. Commutators of the General Electric and of the Westinghouse motors, of relatively the same size, are now so nearly alike, that I see no reason why the armature shafts might not be turned to a standard size and the commutators likewise made of a standard size, so that one would be interchangeable with the other, and the same might apply to brushes, bearing in mind all the time that they are to be classed into the above-mentioned sizes, or something similar. On our small road we have three kinds of motors all of approximately the same size, viz., G.E. 800, G.E. 1,000, and Westinghouse 92-A, and I think you can readily see what a saving in supplies to be carried on hand, and in the flexibility of repairs would be brought about, were it possible to use the same gears, pinions, bearings, commutators and brushes on any of these motors. And if we would go this far, why might we not go the entire length of the rope and draw up complete specifications for motors of 40, 50, 60, 75 and 100 h.p. sizes so that armature coils, field coils, and, in fact, all parts would be interchangeable? Surely the several master mechanics and electricians who have had many years of experience with the use of motors could get together and sift down their several opinions so that a motor design satisfactory to all would be obtained. Controllers should also be so constructed that the contact fingers, especially that part of the finger which wears the most rapidly, could be standardized so that they also would be interchangeable with any other controller of similar size. Trolley bases should be standardized with regard to pins, and the socket into which the pole is to fit, so that bases and poles would be interchangeable. If the sockets are standardized, of course the poles would naturally become so. Trolley harps and wheels should also be standardized, so that they might be interchangeable.

As before stated, my reason for desiring that these various wearing parts be standardized is to facilitate repairs and the expenses thereof, on any one road or system where it seems we cannot get away from several different designs of motors, and not so much simply for the sake of using the same size or styled parts that other roads do. However, I readily recognize that this state of affairs can never be brought about until such associations as our own, and others of like nature in the United States, get together, establish the standard dimensions necessary, and demand of the several manufacturers that they be produced. Of course, I understand that the manufacturers will object, as they may not then be in such a good position to continue supplying repair parts; however, I believe that if this matter is handled properly, that enough pressure can be brought to bear upon the manufacturers to produce the motors and parts as we want them. I am a little disappointed that the largest organization of the kind, the American Street and Interurban Railway Association, has not already taken hold of this subject more vigorously than it appears to have done, for I believe that the best results are to be obtained through action by the largest organization. However, if the minor organizations, such as our own, the New York State Association, the Central States Association, and others, take hold of the subject themselves, or urge upon the large association to take hold of it, the agitation of the subject and the work that may be put upon it, can hardly fail to bear fruit, and we may ere long have the electric railway standards which will no doubt be commonly known as the E.R. Standards.

Electric Railway Notes.

G. U. G. Holman, formerly of the Levis County Ry., has been appointed manager of H. W. Johns-Manville Co.'s electrical department, Boston, Mass.

The Post Office Department has given a contract to the Sandwich, Windsor and Amherstburg Ry. to carry the mails between Windsor and Amherstburg, Ont.

The "pay-as-you-enter" cars introduced by the Montreal Street Ry. have been adopted by the Detroit United Ry., the International Ry. of Buffalo, and other electric railways in the U.S.

The Montreal Street Ry. during July and Aug. will run a number of cars on its lines for the benefit of the children, as well as the aged and infirm of the public institutions in the city. The cars will make the tour of the city, the ride taking about four hours. In 1906 nearly 50,000 took advantage of these outings.

The Montreal Street Ry. has issued an illustrated folder describing the various points on Montreal Island reached by its lines. A plan of the lines is given, showing the routes of the M.S. Ry., the Montreal Park and Island Ry., the Montreal Terminal Ry., and the Suburban Tramway and Power Co.'s line.

The fourth annual meeting of members of the Montreal St. Ry. Mutual Benefit Association was held June 21, when the report and accounts for the year ended April 30 were presented. The accounts showed a total revenue of $31,968.59, and an expenditure of $24,555.97, leaving a surplus of $7,412.62. A. Gaboury was elected to the vacancy on the committee of management caused by the death of L. Trudeau, and Dr. W. E. Nelson was appointed physician in the room of the late Dr. Cameron.

John S. Metcalf Co., a corporation of the State of Illinois, authorized to plan, engineer, build and construct storage elevators of every kind and nature, and to carry on a general contracting business, has been licensed to do business in Ontario under the act respecting extra-provincial companies. The capital to be employed in the province is not to exceed $50,000; and its attorney is R. S. McFarlane, of Midland, Ont.

Standard passenger tariff 185, signed by A. L. Craig, General Passenger Agent, Great Northern Ry., U.S., St. Paul, Minn., has been filed with the Board of Railway Commissioners, Ottawa. It shows standard passenger fare of 3 cents a mile on the Brandon, Saskatchewan and Hudson's Bay Ry., and of 4 cents a mile on the Bedlington and Nelson Ry., Nelson and Fort Sheppard Ry., Red Mountain Ry., and Vancouver, Victoria and Eastern Ry. and Navigation Co.

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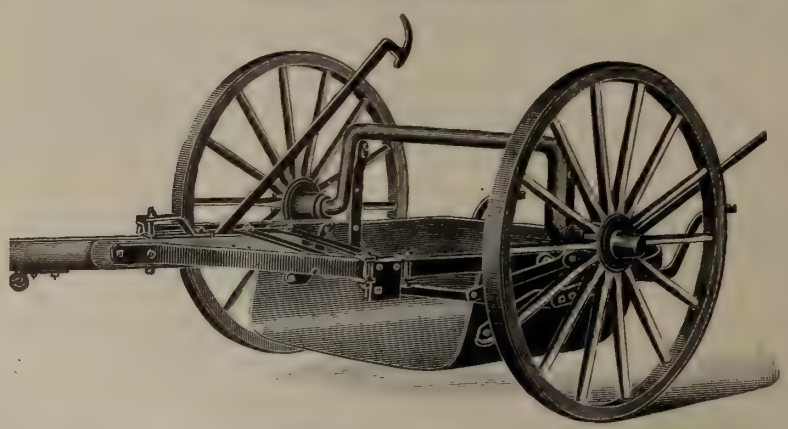

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Grain Elevator Notes.

The Tupperville Milling and Elevator Co. is being wound up, the liquidator being J. W. Sharpe, Dresden, Ont.

The Branckman-Ker Milling Co. is arranging to erect a number of elevators at different points in Alberta during the summer.

The Belbeck Farmers' Elevator and Trading Co. has been incorporated under the North-West Territories' ordinance relating to joint stock companies at Regina, Sask.

A by-law has been passed at Wolseley Sask., granting a loan of $20,000 and exemption from taxation for eight years to J. Cawthorpe & Son, for the purpose of erecting a 300 barrel flour mill and a grain elevator there.

The shareholders of the Quebec Terminal Co. met at Quebec, June 25, for the purpose of ratifying the sale of the company's elevator and property to the Quebec Harbor Commissioners, and to authorize one of the company's officers to sign a deed of sale.

The Alberta Pacific Elevator Co. has commenced work preparing the site for its sorting and distributing elevator at Calgary, Alta. The company at present has over 30 elevators in Alberta, and proposes making the Calgary elevator a concentrating point for all branch elevators.

The case of Day against the Crown Grain Elevator Co., and Cleveland, has been argued before the Supreme Court, Ottawa, and judgment reserved. The action arose over the installation of a dust collecting system which Cleveland built for the Crown Elevator Co. The trial judge in Manitoba gave judgment for Day against both defendants, but the Court of Appeals amended the judgment by dismissing the action as against the company.

A conference upon the government ownership of grain elevators was held in Winnipeg, Man., in June. The conference, after a lengthened discussion, passed the following resolution: "That this conference, for the reasons advanced in the clause on government ownership of storage facilities in the circular issued by the Manitoba Grain Growers' Association, urgently requests the provincial government to acquire and operate a complete system of storage elevators throughout the province along the lines suggested in the clause referred to above, and that the provincial government request such modifications of the Grain and Inspection Act, and such co-operation of the Dominion Government as will make the system capable of yielding the most benefit possible to the producer."

The elevator which is to be built for the Grand Trunk Pacific Elevator Co. at Tiffin, Ont., will be fire-proof, consisting mainly of reinforced concrete. About 24,000 cub. yds. concrete, using 35,000 barrels of cement, will go into the work. There will also be a considerable quantity of structural steel work, and such machinery as will enable the plant to handle the grain with great rapidity. A 1,000 h.p. electrical power plant, and a concrete wharf are included in the work. The storage capacity of the elevator will be 2,000,000 bush. It will receive from lake vessels by two movable marine legs, capable of unloading 20,000 bush. an hour each. The elevator will be equipped to load 240 railway cars a day of 10 hours. The John S. Metcalf Co., Chicago, will be in charge of construction.

The Governor of the State of New York has vetoed the bill which would have compelled the adoption of a flat passenger rate of 2c. a mile on every railway system more than 150 miles long in the State.

A New York dispatch of June 25 says: "The American Express Co. will, on July 1, take over all local express business between New York and Chicago, which now belongs to the U.S. Express Co. Hitherto the American Ex. Co. has handled only the through express business between this city and Chicago on the New York Central and Lake Shore Railways, while the U.S. Ex. Co. handled the local and through business between here and Chicago on the Lackawanna and the Lake Shore Railways. After July 1 this will be reversed. It is also announced that on Aug. 1, the American Ex. Co. will take over the express business on the Erie Rd., now being conducted by the U.S. Ex. Co.

MARINE DEPARTMENT

Atlantic and Pacific Ocean Marine.

The U.S. schooner Minnie E. Keton, 503 tons, sailed from Montreal, May 27, for San Francisco, Cal.

Capt. Pickering, of the Allan Line S.S. Corinthian, has been appointed commander of the new S.S. Corsican, and is succeeded by Capt. Lindsay, formerly in the White Star Line service.

The steamboat Deerhound, purchased by the Post Office Department, arrived at Sorel, Que., from Penzance, Eng., May 23, and was fitted out for her new duties as a mail tender at Rimouski, Que.

Capt. J. B. Forster, Lieut. R.N.R., commander of the C.P.R. Atlantic S.S. Empress of Ireland, was invested with the fifth-class of the Order of the Rising Sun at Quebec, June 9, and presented with a silver teapot and cigarette case by Prince Fushimi, of Japan, who was a passenger on the steamer.

W. Thomson & Co., Managers of the Battle Line, have decided to transfer the home port of the fleet of 14 steamships, representing a total of about 28,000 tons, from Liverpool, Eng., to St. John, N.B. This is an example which should be followed by other Canadian firms owning steamships which are now borne on the British register.

The Canada Cape, the Elder-Dempster S.S. performing the Canada-South Africa service, reached Montreal, June 4, after a three months' voyage from Delagoa Bay, Portuguese East Africa. The steamer called at Demerara, Trinidad and Barbados en route, making a roundabout trip. The run between Canada and South Africa usually occupies about 50 days.

A report submitted to the St. John, N.B., Board of Trade, June 4, showed that the value of cargoes shipped from that port during the winter season of navigation was $3,413,997 less than in the season of 1905-06. The decrease in wheat shipments was $3,000,000 alone, which was accounted for by the freight congestion in the west. The exports of U.S. canned meat and lard showed a decrease of $300,000 as compared with the figures of 1905-06.

The Quebec Steamship Co.'s S.S. Pretoria has made her last trip between New York and Bermuda, and upon the completion of a special trip to London, Eng., will be sold. Capt. McKenzie, who is in command of the Pretoria, will take over the Guiana, a new vessel for the company and bring her out from England. A cable received at Quebec June 8, announced that the new steamer Guiana had been launched that day at Sir James Laing & Sons' yard, Sunderland, Eng.

ALLAN LINE ROYAL MAIL TWIN SCREW STEAMSHIP CORSICAN

Built recently for the Liverpool-Canada route. For description see June issue, page 449.

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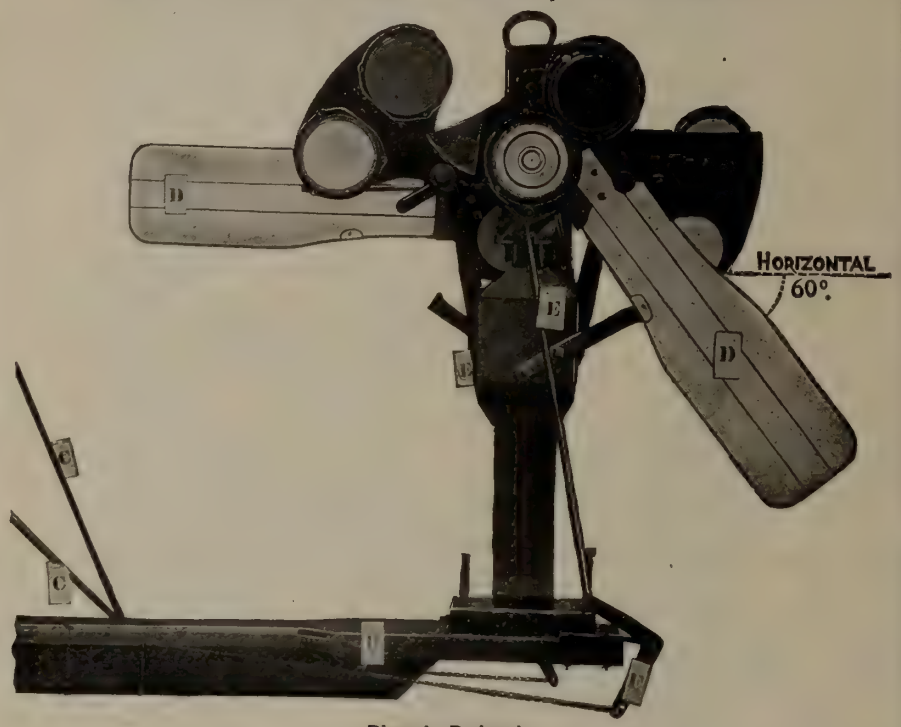

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Coal—Bituminous—Average bituminous coal contains about 80 per cent. of carbon, 5 per cent. of hydrogen, 15 per cent. of other substance generally considered as foreign matter or impurities; ignites at about 1,000 degrees and weighs about 52 pounds per cubic foot. One ton of 2,000 pounds occupies 36 to 40 cubic feet. A bushel of 2,500 cubic inches weighs 75 pounds. Specific gravity 1.40.

Coal	B.T.U. per lb. combustible	Ash per cent.	Moisture per cent.
Anthracite	14,700	10 to 20	1 to 5
Semi-anthracite	14,900	10 to 20	1 to 5
Semi-bituminous	15,800	5 to 10	1 to 6
Bituminous—Eastern	15,000	5 to 20	2 to 6
" Western	14,200	8 to 25	6 to 15
Lignitæ	12,200	5 to 20	10 to 30

Coal—Consumption—Varies greatly with different conditions of trains, roads, locomotives, etc. Exact comparisons are impossible unless we know all conditions, which is seldom the case. Tests on several roads running into New York in 1897 give these results: Hard Coal: Average per train mile, 17.3 freight cars, 122 lbs.; average per train mile, 7 passenger cars, 112 lbs.; average per freight car mile, 7.05 lbs.; average per passenger car mile, 16 lbs. Soft Coal—Average per train mile, 18.15 freight cars, 120 lbs.; average per train mile, 7 passenger cars, 110 lbs.; average per freight car mile, 6.06 lbs.; average per passenger car mile, 15.07 lbs.

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The first of a series of experimental mail transfer tests occurred off Sydney, N.S., June 9, when the Allan Line S.S. Virginian, from Montreal for Liverpool, outward, took on board mails and passengers. The transfer was made by the Dominion Government str. Montcalm. H. & A. Allan report that the vessel was detained 2½ hours in making the transfer. This was accounted for by the heavy swell which caused the Montcalm to crash against the Virginian, receiving serious damage to her upper works. The transfer was finally accomplished inside the harbor.

The Freight Bureau of North Pacific Asiatic Steamship Lines put in force on July 1 the following rates on flour: To Japanese ports of call, $4.50 a ton; to Hong Kong, $4.50 a ton; Shanghai, $5 a ton. The present rates are $3.50, $4 and $4 respectively. Those present at the meeting when the new rates were made were: B. W. Greer, C.P.R. Pacific Steamship Line; J. H. Dewson, Portland and Asiatic Steamship Co.; F. M. Studley, Nippon Kusen Kaisha Line; F. Waterhouse, Vice-President Boston Steamship Co.; T. Horne (Dodwell & Co., agents for China Mutual Line); H. M. Adams, Assistant Traffic Manager Great Northern Ry., and W. D. Benson, Secretary.

Conflicting reports appear as to the steamship service which it is proposed to establish on the Pacific Coast, and in which F. Waterhouse & Co., Seattle, Wash., and A. Weir & Co., London and Glasgow, are interested. One report states that six steamships varying from 5,500 tons to 12,000 tons are to be put on a route from Seattle, calling at one or more ports in British Columbia, to ports in Corea and North China, whilst another report states that the service will start Aug. 1, and that the route of the steamships will be between Puget Sound ports, via San Francisco, to Auckland, New Zealand; Sydney and Newcastle, New South Wales, Australia. The steamships which will be operated in the Australian Mail Line are said to be Foreric, Aymeric, Boveric, Iveric, Gymeric, and Tymeric, all of which are freight vessels. A New York despatch of June 5 says that this new monthly service is to take the place of the U. S. Oceanic Line which recently went out of operation.

The question of the "All Red" steamship and rail route round the world, via Canada and Australia, which was discussed at the recent Colonial Conference in London, Eng., is being considered by the Imperial authorities in London, Eng. The Premier stated recently that until the investigations had further advanced he was unable to say whether a formal committee would have to be appointed to discuss details or not. It is estimated that a subsidy of about £400,000 a year would be required for the line. The Premier of New Zealand said at the conference that that colony would contribute £100,000 a year for a 21 day service. Press reports state that the Dominion Government would probably be prepared to contribute $1,000,000 a year towards the proposed service. Hon. C. Sifton, on returning to Ottawa from England, May 30, stated that the negotiations now under way between the Imperial and the Colonial Governments would soon result in the establishing of a new independent fast steamship service on the Atlantic, backed by a company of capitalists headed by Lord Strathcona. The firm of Cayzer, Irvine & Co. says that the service can be given as suggested if Great Britain and the colonies are prepared to pay the money it will cost to give the speed required.

Jas. Cormack, a member of Lloyds Committee, speaking at Leith, Scotland, May 29, said there would be a considerable increase in shipbuilding in Canada when an adequate supply of labor could be obtained.

Maritime Provinces and Newfoundland.

Capt. W. Killam, a retired mariner, of Hartford, N.S., died in Yarmouth, N.S., May 29, and Capt. J. Leonard, also retired, died in St. John, N.B., June 2.

The Department of Marine is installing a new dioptric lantern at the light station maintained by the Dominion Government at Cape Race, Nfld.

The St. John River str. Crystal Stream was burned at her moorings near St John, N.B., June 21, three of the crew being burned to death, and a number injured.

The Dominion Dredging Co. has purchased a dredge and two scows from the C. S. Packard Dredging Co., of Boston, Mass., for work on its contract at St. John, N.B.

Capt. G. B. Dunham, who died at Barton, N.B., June 10, aged 78, never lost a man or a ship during his 50 years as a master mariner. He retired from active work 1899.

The brig New Dominion, owned by J. Weatherbee, Louisburg, N.S., was driven ashore in Gaberus Bay, N.S., June 11, during a storm and has become a total wreck. She was uninsured.

The strike of longshoremen at Halifax, N.S., was brought to a close June 4, when the demand of the men for 25c. an hour for day work and 30c. an hour for night work was conceded.

The public harbor of South Grand Manan, N.B., by order-in-council has been divided into three harbors, to be known as Whitehead Harbor, Grand Harbor and Seal Cove respectively.

The Dominion Government has purchased the Cunard wharf property at Halifax, N.S., for $187,000. It is intended to erect extensive warehouses, etc., on the property in connection with the Intercolonial Ry.

The Dominion Government steamboat Gulnare is to be employed during the current season on a survey of the tides and currents of the Bay of Fundy. The work is under the charge of Dr. W. Bell Dawson, Ottawa.

The Ella and Jennie, owned by Capt. Ingalls, Grand Manan, N.B., and engaged in the coasting trade, is a new schooner-rigged vessel, fitted with a 25 h.p. gasolene engine for use when the wind is not favorable for sailing.

Capt. J. A. Farquhar, Halifax, N.S., has purchased in Glasgow, Scotland, a steam yacht, formerly owned by Lord Strathcona. She will be brought out to Halifax and refitted to engage in the coasting freight and passenger trade.

The Glenmount, the first of the steamships built for the Montreal Transportation Co., to carry steel rails from the Dominion Iron and Steel Co.'s plant at Sydney, N.S., to Fort William, Ont., was loaded at the former port June. 5.

The liquidators of the Harbor Grace, Nfld., Whaling Co. have disposed of the steamer and other property of the company, and have issued a notice that the assets will be distributed, July 5, among those who have proved their claims.

A submarine signalling station is being installed by the Department of Marine about two miles off Negro Head, for the purpose of minimizing the dangers of making the entrance to the harbor of St. John, N.B., during foggy weather.

The steamboat Beatrice which stranded at Cranberry Head, N.S., Dec. 24, has been successfully floated by Capt. Larder and taken to North Sydney, N.S. She is not very badly injured, and it is expected that she will be repaired at but little cost.

The Dominion Atlantic Ry. str. Prince George received considerable injury at Yarmouth, N.S., June 8, by being struck by the Norwegian bark Glamis, entering the port. The Prince George had three boats, and a lot of iron work on her deck carried away.

The Bras D'Or Steamboat Co., it is reported, has decided to purchase a steamer in Great Britain to replace the Weymouth for the opening of navigation of 1908. The Weymouth runs between North Sydney and the northern ports of Victoria County, N.S.

The Dominion Atlantic Ry. is running its steamship Prince Arthur between Yarmouth, N.S., and a pier at the foot of East 20th St., New York. The pier is a new one, and as yet is unnumbered, and the company is constructing freight office, baggage rooms, etc., on it.

The Dominion Iron and Steel Co., according to a statement of the General Manager, expects at no distant date to have its own fleet of steamships engaged in carrying steel rails from Sydney, N.S., to Port Arthur, Ont. At present it has some steamships under charter.

The shareholders of the Lucerne S.S. Co. met at the offices of the company, St. John's, Nfld., June 25, when A. J. Harvey, liquidator, laid before them an account of the manner in which the winding up of the company had been conducted and the property disposed of.

Capt. M. Golinsky, of Hamilton, Bermuda, has been interviewing merchants at St. John, N.B., with a view of establishing a line of steamers to run between St. John, N.B., and Jacksonville, Fla., calling at Bermuda, and points in the West Indian Islands, and to carry both freight and passengers

The Norwegian str. Universe, which stranded at White Head, N.S., April 24, while on a voyage from New York to Sydney, N.S., was successfully floated June 13. After being temporarily repaired, the steamer was towed to Halifax, where permanent repairs are being made in the dry dock.

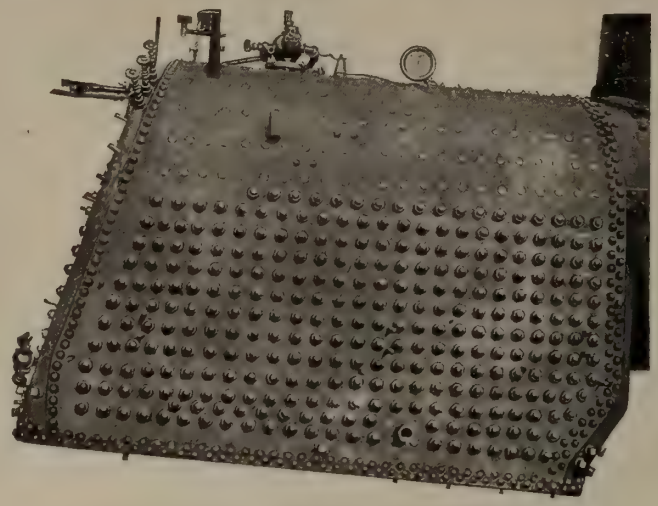
The Newfoundland Legislature has voted $166,250 to provide for steamship service on the coast during the current year. The principal services provided for are: south and west end $36,000, north-east coast $33,250, Labrador $18,000, Placentia Bay $13,000, Channel and St. John's $13,000, Straits of Belle Isle $9,600, Bonavista Bay, Trinity Bay and Notre Dame Bay $9,100 each.

A ferry steamer for the Clifton Steamship Co. was launched from the Flewelling shipyard, Clifton, N.B., June 5. The hull is 65 ft. long, with a breadth from guard to guard of 32 ft., and has a draught of 2 ft. 6 in. The boilers are being supplied from New Glasgow, N.S., and the engine from West St. John. The new ferry which will ply between Rothesay, Clifton and Moss Glen, was named Premier.

The following appointments have been made by the Dominion Government: W. Blair, port warden at Dalhousie, N.B.; A Cheney, harbormaster at Whitehead, N.B.; J. W. Wooster, harbormaster Seal Cove, N.B.; T. Ingals, sr., harbormaster Grand Harbor, N.B.; W. D. Bennett, port warden, Hopewell, N.B., G. A. Allen, harbormaster, Pugwash, N.S.; H. S. Melanson, member of the pilotage commission for Bathurst, N.B

The Clifton Steamship Co., Ltd., has been incorporated under the New Brunswick Company's Act, with a capital of $3,500 and offices at Clifton, N.B., for the carrying on of a general navigation business, and more particularly to operate a ferry for the conveyance of passengers, teams and freight across the Kennebecasis River. The provisional directors are: H. Gilbert, Rothesay, N.B.; O. W. Wetmore, S. S. Wetmore, G. H. Flewelling, Clifton, N.B.; J. L. Flewelling, Gondola Point, N.B.

A press report states that the Dominion Coal Co. has decided to place an order on



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the Clyde, Scotland, for the construction of a 4,000 ton steamship, to have accommodation for 100 first-class and 40 second-class passengers, and capable of steaming 14 knots an hour. The new vessel, it is expected, will make the trip between Montreal and St. John's, Nfld., calling at Charlottetown, P.E.I., and Sydney, N.S., in ten days. The report states that she is to be completed for the opening of navigation in 1908.

The steel steamboat Sobraon, registered at London, Eng., has been purchased by A. McDougal, St. John's, Nfld., for the whale fishing business. The Sobraon is a steel screw schooner-rigged steamer, with web frames, of the spar deck type, her general dimensions being: length, 286.3 ft.; breadth, 41 ft.; depth, 26.4 ft.; her gross tonnage is 2,385 tons, and her net tonnage 1,541, while she will carry about 3,780 tons dead weight. She is equipped with triple expansion engines of 278 n.h.p., cylinders 23½, 39 and 64 in. diameter with a stroke of 42 in.

The str. Bridgewater, which had been chartered to take the place of the Strathcona, burned in Dec., 1906, went ashore in a fog off Port Beckerton, N.S., June 8, and became a total loss. The passengers and crew were got off safely. The steamer was owned by the Coastal Steam Packet Co., but was under a three months charter to the Canso Steamship Co., G. S. Campbell & Co., agents. She was a steel screw steamer, built at Dumbarton, Scotland, 1889, and was brought out to Bridgewater, N.S. 1905. Her dimensions were: length, 120 ft.; breadth, 20 ft.; depth, 9 ft.; tonnage—208 tons gross, 119 tons register, and she was equipped with engines of 54 n.h.p.

By proclamation under the provisions of the Canada Shipping Act, the harbor of Port Wade, N.S., has been declared to be a public harbor within the jurisdiction of the Parliament of Canada. The harbor of Clementsport, N.S., has been declared to be a public harbor to which the act of 1877 respecting the appointment of harbormasters for certain ports in N.S. and N.B. shall apply. The proclamations declaring St. Ann's Harbor, St. Ann's Bay, Digby, and Bear River, N.S., to be harbors to which the provisions of the act relating to harbormasters shall apply, have been revoked by a recent proclamation, and the same are declared to be harbors subject to the jurisdiction of the Parliament of Canada.

The Meteorological Service is sending time signals from the observatory at St. John, N.B., by telegraph to the wireless station at Camperdown, N.S., where special apparatus has been installed to automatically transmit the signal to ships at sea within the zone of that station. Time signals will be sent each week day morning as follows: Beginning at 9h. 58m., a.m., Atlantic time, dots are made each second up to and including 9h. 58m. 57s., then a pause of two seconds, followed by a dot at 9h. 59m.; then another pause of two seconds follows; the clock then makes dots each second up to and including 9h. 59m. 50s.; a pause is then made, followed by a dot at 10h. a.m., Atlantic or Standard time of the 60th meridian west longitude, equivalent to 2h. p.m., Greenwich mean time.

The regulations made by order-in-council dated Aug. 18, 1898, respecting quarantine have been rescinded, and a new series of regulations substituted therefor by an order-in-council of June 12. The quarantine stations in Canada are: Charlottetown, P.E.I.; Halifax, Sydney and Louisbourg, N.S.; St. John and Chatham, N.B.; Grosse Isle (Rimouski, Louise Embankment, Quebec, and the G.T.R. wharf, Levis, being sub-stations), Que.; Victoria, Vancouver and Prince Rupert, B.C.

Province of Quebec Marine.

The steam collier Business struck a rock in Lake St. Louis and sank on getting into the Lachine Canal recently.

The award of the arbitrators in the longshoremen's strike at Montreal has been sent to the Minister of Labor.

The Quebec Legislature at its recent session voted $1,000 towards the maintenance of a school of navigation at Quebec.

The name of the steamboat Polino, official number 62,598, registered at Quebec, has been changed by order-in-council to Natashquan.

The Department of Marine has under consideration tenders for the supply of steel plates and shapes required for the construction of a vessel at the Sorel dockyard.

An order-in-council has been passed approving of a number of amendments to the by-laws of the Montreal Harbor Commissioners, affecting the wharfage rates to be charged.

The North Shore Transportation and Wrecking Co. has passed a by-law reducing the number of its directors from eight to six, who shall be owners of at least 20 shares each in the capital stock of the company.

We are advised that while F. E. Hall & Co., Montreal, are considering the matter of placing an order for another steamboat with the Grangemouth & Greenock Dock Co., on the Clyde, nothing definite has been decided.

An investigation was opened at Montreal, June 11, before Commander Spain, Wreck Commissioner, and J. J. Riley, Superintendent of Pilots, into the sinking of the steamboat Mary at the Tarte pier on the ice moving out of the river in the spring.

Following are the officers and directors of the Quebec and Levis Ferry Co. for the current year: President, D. C. Thomson; Vice-President, C. H. Shaw; other directors, S. H. Dunn, H. B. Patton, J. S. Thom, G. E. A. Jones, Alph. Gourdeau; Manager, W. J. Thompson.

J. H. Talbot has been appointed President of the Corporation of Pilots, Quebec, succeeding A. Larochelle, appointed Superintendent of Pilots. The latter succeeds E. Larochelle, who has been appointed captain of the Dominion Government mail tender Deerhound, at Rimouski, Que.

The vessel for which the Department of Marine recently asked for tenders for the supply of plates, etc., is intended to be used in the lighthouse construction service below Quebec. Her dimensions will be: length, 206 ft. 6 in. over all; moulded depth, 34 ft 6 in.; depth, 19 ft. 3 in.

The attention of pilots in charge of vessels passing through Quebec harbor is called by the Department of Marine to the fact that complaints have been made of the breach of the by-law prohibiting the use of steam whistles, except for giving such signals as are obligatory for the safe navigation of the waters.

The consolidated actions arising out of the collision in Montreal harbor, July 5, 1906, between the str. Gaspesian and the Montreal Grain Elevating Co.'s floating elevator no. 7, have been decided by the Admiralty Court in favor of the Gaspesian, and condemning the owners of elevator 7 in damages and certain costs. The damages to the Gaspesian are to be ascertained in the usual way by the Registrar.

F. W. Cowie, Superintendent of the construction of the St. Lawrence Channel, stated recently that there are seven dredges at work between Montreal and Quebec, in addition to six elevator dredges at Cap a la Roche. The J. Israel Tarte is working at Lake St. Peter, where it is proposed to widen the channel from 300 ft. to 800 ft. The navigation of the river to Lake St. Peter by night, Mr. Cowie says, is now perfectly safe.

The Kaine & Bird Transportation Co., Quebec, is having six barges built in Quebec—two at Ste. Irenee and four at St. Alphonse—and has purchased two barges in the U.S. for the pulpwood trade between Quebec ports and the U.S. A new barge, the Sarsfield, has been completed for the company at Baie St. Paul for the same trade. The dimensions of this barge, as well as of the six others building are: length, 125 ft.; breadth, 30 ft.; capacity, about 400 cords.

The Ethelwold Steamship Co. has been incorporated under the Dominion Companies' Act to carry on a general navigation business in Canada or elsewhere, and, in particular, to purchase the British steamer Ethelwold, or any share or shares therein. The chief place of business is to be at Montreal, and the company may have one or more offices outside Canada. The capital is fixed at $20,000, and the provisional directors are: A. E. Woodworth, St. Lambert, Que.; A. Charters, H. J. Hague, S. D. Harris, Montreal; W. J. Dubois, New York City.

La Compagnie du Nord has been incorporated under the Quebec Companies' Act, with a capital of $40,000 and offices at Chicoutimi, Que., for the purpose of carrying on a general navigation business, and particularly to establish one or more lines of steamers between the port of Chicoutimi and the different places on the Saguenay river, and on the River St. Lawrence, throughout the Province of Quebec; to construct wharves and all necessary incidental powers. The provisional directors are: E. Boivin, R. H. dit Beaulieu, L. E. Dubee, J. E. A. Dubee, Chicoutimi; T. Simard, Bagotville, Que.

The Battle Island Transportation Co. is the title of the company which has purchased the steamboat Cuba, formerly running out of Toronto. The company was recently granted a charter of incorporation under the Dominion Companies' Act, the provisional directors being: G. L. Wells, R. B. Hunter, T. Hunter, G. C. Webb, Fulton, N.Y.; A. H. Lomer, Montreal, the latter being the manager. The capital of the company is placed at $18,000 and the offices are at Montreal. The company was recently operating a barge handling coal and grain between Ogdensburg, N.Y., and Montreal.

In the Admiralty Court, Montreal, Justice Dunlop gave judgment recently in favor of the defendant in the case of the Canada Atlantic Ry., the Northern Elevator Co., and the Ogilvie Flour Mills Co. against the Richelieu and Ontario Navigation Co. The claim was for $8,351, value of the barge Huron, and $35,684, value of a cargo of grain on board the same. The defendants steamboat Hamilton in passing through the Soulanges Canal, May 8, 1905, it was alleged, caused the barge to strike against the canal bank and founder. The Court found that the barge was too near the bank, and was under the charge of inexperienced hands.

The Lake St. John and Saguenay Navigation Co. is being operated by the Quebec and Lake St. John Ry., which recently was taken over by Mackenzie, Mann & Co. for the Canadian Northern Quebec Ry. The company operated the following lines of steamers: Roberval-St. Felicien line, 20 miles; Roberval-Mistassini line, 46 miles; Roberval-Honfleur line, 33 miles; Roberval-Peribonk Mills line, 32 miles; Roberval-Grande Decharge line, 36 miles; Roberval-St. Jerome line, 21 miles; and Roberval-St. Gideon line, 28 miles. All these lines are on Lake St. John and tributary waters, but the company proposed to put on steamers to operate between Quebec and the Saguenay River.

The question of the cost of the bail bond of the Cape Breton in the Canada-Cape Breton

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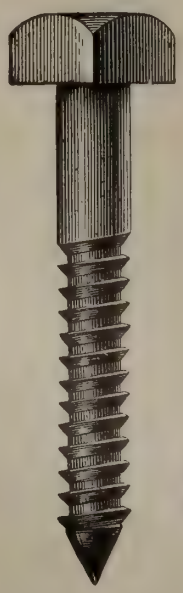

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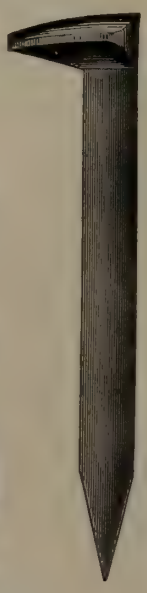

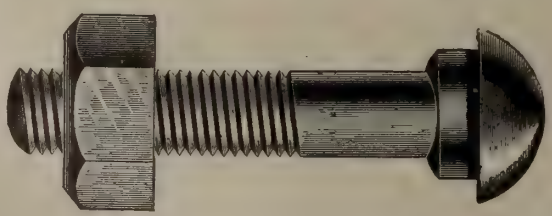

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collision case came before the Quebec Admiralty Judge May 27. The bill of costs which the Richelieu and Ontario Navigation Co., owning the Canada, was asked to pay as the losing party in the litigation, included a charge of $2,660 paid to the Royal Trust Co. for furnishing and keeping in force the bail bond during the action. The Registrar fixed the remuneration at $1,175, being 1% per annum on the amount of bail, and both sides moved to have this revised. After an exhaustive argument the Court further reduced the amount to $710, on the ground that the High Court rules did not allow the fee for bonds at the rate of 1% per annum, but only at the rate of 1%.

The St. Lawrence Canadian Navigation Co is operating a daily service between Quebec and Montreal with the steamers Colonial and Imperial. The company also operates the str. Prefontaine. The officers and directors are: President, Dr. A. A. Bernard; Vice-President, J. T. Lavery; General Manager, W. Paul, Jr.; other directors, G. R. La Brecque, V. Lemieux, F. Nadeau, and A. Bourgeois. The Imperial is a new steel, side-wheel steamer, built at Sorel, 206 ft. long, with a breadth of 40 ft., fitted for the freight and passenger trade. The Colonial, which does not appear on the Canadian register, is said to have been reconstructed. The dimensions of the Prefontaine were given on pg. 555 of our issue of Sept., 1906, at the time of the organization of the company.

The G.T.R. in a circular issued about fifty years ago announced that arrangements had been made with the proprietors of the Great Eastern Steamship to send her to Portland, Me., on her first voyage to America, the object being to enable passengers to reach Canada and the Western States by a continuous route.

The Industrial Fire Insurance Co. is applying for incorporation under the Ontario Insurance Act, with a capital of $500,000 and offices at Toronto, for the purpose of carrying on the business of fire and inland marine insurance in all its branches. The applicants are: A. H. Garrett, G. F. Beer, J. A. Ready, T. H. Watson, Toronto; W. Krug, Chesley, Ont.

The River Plate Shipping Co. has been incorporated under the Dominion Companies' Act, with a capital of $150,000 and offices at Montreal, to carry on a general navigation business within the Dominion of Canada, and elsewhere. The provisional directors are: G. I. Dewer, Ottawa, Ont.; C. A. McCollogh, New York City; W. A. Taft, Arlington, Mass.; W. McKissock, Boston, Mass.; N. M. Ward, Orange, N.J.

A general notice to mariners issued by the Department of Marine says: "Observations obtained during recent years show that the secular change in the variation of the compass is in some cases greatly different from what was anticipated. The results have been embodied in the Admiralty variation chart for the epoch, 1907, and this chart should be consulted on all occasions before deciding on the variation to be allowed in shaping course, etc. The compasses on the charts may be in some cases as much as 2 degrees in error."

The threatened suspension of the publication of the notices to mariners compiled by the U.S. Hydrographic Office, says Shipping Illustrated, because of the lack of funds specifically appropriated for this purpose, cannot be termed otherwise than an ignoble economy. The paragraph concludes: "It is to be hoped that the Government which even now is doing much less than other powers in the matter of adding to the world's stock of hydrographic information will not inflict such a disgrace upon the whole country at large."

Ontario and the Great Lakes.

The Kirkfield lift lock on the Trent Valley Canal will be opened for navigation early in July.

The G.T.R., it is reported, proposes to erect another large ferry slip at Grand Haven, Wis.

The Great Lakes Dredging Co. has commenced work on its contract for dredging at the mouth of Rainy River, Ont.

The Dominion Government is preparing to buoy and light Scugog River channel between Lindsay and the lake.

The U.S. steamboat General B. Franklin, of Alexandria Bay, N.Y., has been purchased by P. Cavanagh, Perth, Ont.

The Toronto City Council has leased the old dock at the foot of Yonge St. to the Toronto Ferry Co., for freight purposes.

The Department of Marine proposes to erect a lighthouse at Jackfish Bay, and to establish several new lights and signals at other points on Lake Superior.

The marine interests at Toronto have sent a strong protest to the Department of Marine against the proposed removal of the light at Gibraltar Point, Toronto.

The Department of Marine received tenders to June 10 for the charter of a steamer to deliver supplies to the lighthouses above Montreal, commencing at that city.

The Canadian Lakes Transportation Co.'s steamship Morena, which was lost off the Newfoundland coast, was insured for £9,000 and her cargo of pig iron for £12,000.

It has been ascertained that there is 18 ft. of water in the Western gap at Toronto, so that all vessels usually coming into the bay can enter by that channel in safety.

The steamship Turbinia ran aground at Lewiston, N.Y., June 15, as she was leaving for Toronto at 5.30 p.m., and remained fast until 9 p.m. The steamer was uninjured.

The Lemcke Tug Co. has been licensed in Ontario under the act respecting extra-provincial companies, C. Lemcke, Lion's Head, Ont., being appointed its attorney.

Capt. D. Mackay, formerly chief officer of the Canadian Lakes Transportation Co.'s steamship Corunna, attempted to commit suicide by jumping into Toronto bay, June 6.

It has been decided by the U.S. Lighthouse Board for the Great Lakes to replace the fog whistle at the mouth of St. Mary's River, Mich., with an electric submarine bell.

A gasolene buoy has been moored over the sunken dredge Sir Wilfrid, off Newcastle, Ont. The dredge lies in 75 ft. of water, but reaches within 10 ft. of the surface of the lake.

The Upper Ontario Steamboat Co. has been licensed in Ontario under the act respecting extra-provincial corporations, F. L. Smiley, New Liskeard, Ont., being appointed its attorney.

The Great Lakes Register of Cleveland, Ohio, operating a surveying bureau, making classifications and ratings of vessels, is reported to have been taken over by the Lake Marine Underwriters.

The Northern Navigation Co. will, it is reported at Sault Ste. Marie, Ont., make an attempt to recover some of the machinery and equipment of the str. Monarch, which was wrecked on Isle Royale in Dec. 1906.

The longshoremen's strike at Fort William was settled June 11, when the men returned to work. At Port Arthur the Canadian Northern Ry.'s offer was refused, and the company put in an entirely new gang of men.

The Dominion Government has placed two acetylene gas buoys on the east side of the Limekiln crossing, one at the lower entrance of the east channel and the other at the upper end of the channel as the steamers leave it.

A contract is reported to have been let by the Department of Railways and Canals to J. Riley, of St. Catharines, Ont., for the construction of the proposed branch of the Trent Valley Canal from Holland Landing to Newmarket, Ont.

The Richelieu and Ontario Navigation Co.'s str. Kingston, on her first trip of the season from Toronto, ran into the wharf at Kingston, Ont., damaging one of her wheels to such an extent that she was off her route for some days.

The U.S. survey department reports that the water in Lake Ontario during May was as high as in May, 1893, and higher than in any May since, except 1904. It was expected that the water in the lakes would go on rising until the middle of July.

Three whaleback steamers from the Upper Lakes passed through the St. Lawrence canals recently for Boston, Mass. On Lake Erie, 18 ft. of the nose, or bow, was cut off each steamer, to enable them to pass the locks, and was replaced at Levis, Que.

The Department of Marine is arranging with the contractor for the breakwater at Toronto to start work at once. The dredging of the eastern channel is also to be gone on with forthwith, but the western channel matter has not been definitely arranged.

R. Logan, who supervised the construction of the C.P.R. Upper Lake steamships Alberta and Athabasca, in Scotland, and of the Manitoba at Owen Sound, Ont., was in that town recently inspecting these vessels, with a view of preparing plans and estimates for lengthening them.

Capt. G. McDougall, for 15 years in command of the C.P.R. lake steamship Athabasca, died at Owen Sound, Ont., June 6, of cancer. For 43 years he had been engaged in navigating on the Great Lakes, and before entering the C.P.R. service he was master of the United Empire and the Ontario.

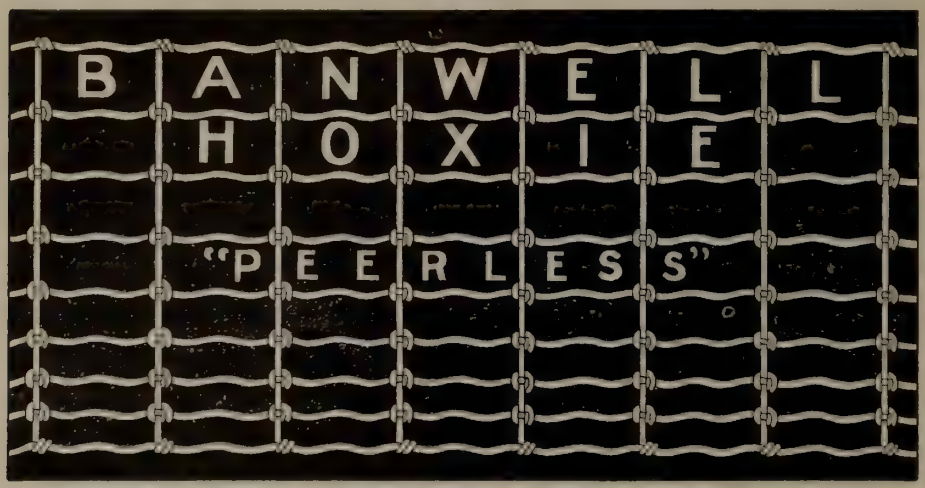
Capt. John Gaskin was presented with a Fenian Raid Medal at Kingston, Ont., June 9, when he related how he ran a cargo of whiskey, peas and pork to Cornwall for the benefit of the Canadian soldiers quartered there. He was then in command of the str. Ranger, trading between Chicago and Montreal.

The Montreal steamboat Salaberry has been purchased by the Belleville Cement Co., for use as a ferry steamer. The Salaberry is a screw steamer and was built at Valleyfield, Que., 1902, her dimensions being: length, 99.5 ft.; breadth, 21.6 ft.; depth, 5.4 ft.; tonnage—gross, 222; register, 142; n.h.p., 13½.

Judgment has been given in the Ontario courts for $13,984.79, with $840 interest, in favor of Johnston and Higgins of New York against Marsh and Marsh, Toronto, and the Canadian-Jamaica Steamship Co., on account of insurance premium of the str. Turbinia, chartered by the defendants during the winter of 1905-6.

R. W. Perks, the British M.P. who is visiting Canada, is connected with the British company which has a charter to construct the Montreal-Georgian Bay ship canal. Mr. Perks has interviewed members of the Government in connection with the project, and has spent some time in going over a portion of the route of the projected canal.

An order-in-council has been issued authorizing the ferry plying across the Ottawa River between Monte Bello, Que., and Alfred, Ont., to operate on Sundays in the same manner as on other days. The order is issued under the provisions of sec. 7 of the Ferries Act, and sub-section n, sec. 12, of the Lord's Day Act, chap. 153, R.S.C.



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Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
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160 Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106.10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

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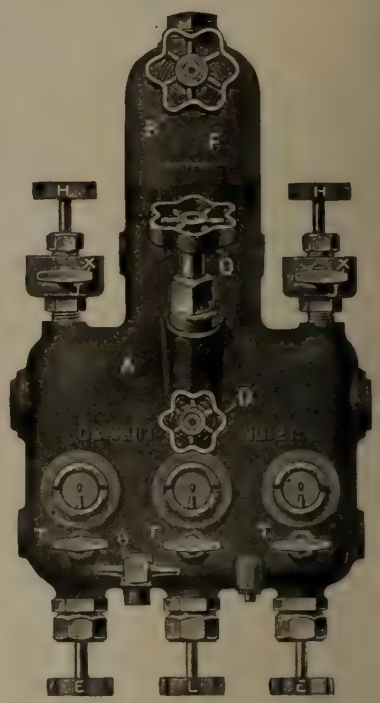

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Steamer leaves Collingwood Monday and Friday 10.30 p.m.

For North Channel, Sault Ste. Marie and Mackinac

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For Soo, Port Arthur, Fort William and Duluth

Steamers leave Sarnia 3.30 p.m. Monday, Wednesday and Friday (Friday steamer going through to Duluth).

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The Department of Marine has under consideration plans for the improvement of the harbor at Kingston, Ont. The proposition involves some dredging at the slips, the erection of clearer range lights and the placing of additional gas buoys in the channels. A proposition to increase the depth of water to 17 ft. was not approved on the ground that the trade done did not warrant the estimated cost, $228,750.

The Montreal Transportation Co.'s barge Cornwall, one of four barges being towed by the tug Emmerson from Kingston, Ont., to Montreal, struck on a rock in the Narrows, near Brockville, Ont., June 11, and sank in 16 ft. of water. The tug and the other three barges were uninjured. The Cornwall, which had 1,200 tons of coal, was unloaded, and released by the tug Mary P. Hall, owned by the Donnelly Salvage & Wrecking Co., and taken to Kingston for repairs.

The marine court sitting at St. Johns, Nfld., has decided that no blame can be attached to Capt. McKinnon and officers of the str. Morena, which was lost on the Newfoundland coast, May 18, on a voyage from England to Toronto with a cargo of pig iron. The Corunna, a sister ship, reached Toronto, May 23, and the Nevada, the third of the steamers purchased in Great Britain for the Canadian Lake Transportation Co., Ltd., reached the same port May 29.

The Nipissing Transportation and Trading Co., Ltd., has been incorporated under the Ontario Companies' Act, with a capital of $100,000 and offices at Sturgeon Falls, to take over the business now carried on with the same title by H. E. McKee and C. A. Britton, and to carry on the same; and to purchase or construct and to sell vessels of all descriptions, with various subsidiary powers. The provisional directors are: G. Gordon, H. E. McKee; C. A. Britton, J. W. S. Corley, T. E. McKee, L. E. Bolster and E. D. Low, Sturgeon Falls, Ont.

The O'Connor Steamboat and Hotel Co.'s organization for the current year is: President, D. Fasken; Vice-President, W. G. Gooderham; Secretary-Treasurer, W. H. Gooderham; other directors: C. D. Warren, J. Bourke. Capt. Jno. Malcolmson, for some years identified with the Welland House, St. Catharines, Ont., has been appointed General Manager, D. O'Connor having retired owing to other business interests. The company owns three tourist hotels on Lake Temagami, and several steamboats which connect with the Temiskaming and Northern Ontario Ry. at Temagami Station.

The Sparrow Lake Steamer Line operates between the Canadian Northern Ontario Ry. station at Sparrow Lake and all points on Sparrow Lake and Severn River. The line, which is managed by Capt. Frank Stanton, at present operates one passenger steamboat, the Lakefield, which was built at Sparrow Lake, 1903, and is a screw steamer fitted with engines of two n.h.p., and having the following general dimensions: length, 63 ft.; breadth, 14 ft.; depth, 5 ft.; tonnage—gross, 33 tons; register, 22 tons. She has a speed of about 12 miles an hour, and daily trips are made to all summer resort hotels and boarding houses on the lake and river.

The Canadian Northern Ontario Ry. is operating a freight and passenger service between Parry Sound and Port Arthur, Ont., a round trip being made weekly by the steamboat Seguin, owned by the Parry Sound Transportation Co. The Georgian Bay Navigation Co., of Parry Sound, is operating a bi-weekly service in connection with the C.N.O. Ry. from Parry Sound to Sault Ste. Marie, with calls at a number of intermediate ports. This service is being given by a steamboat which the owners are calling Killarney, but which appears on the Canadian register as Mabel Bradshaw, official no. 117,085. She is a propeller, built at Benton Harbor, Mich., in 1889 and was recorded in the U. S. register as gross tonnage 332, length 135 ft., beam 26 ft., depth 9 ft., class A1½. As will be seen in the list of vessels recently registered in Canada, on another page, she has been registered at Collingwood, Ont., official no. 117,085. Application was made to the Department to change her name to Killarney, but we were officially advised June 14 that the Department had not been able to accede to the request. We understand the reason for the refusal is that there is a Killarney Belle on the Canadian register, which is owned by the Dominion Fish Co., and also registered at Collingwood.

The St. Lawrence and Chicago Steam Navigation Co. is having built at Dundee, Scotland, a bulk freight steamer similar in size and equipment to the Iroquois. The hull is of steel, of the spar deck type, with twin deck beams but no decks laid, and will have a dead weight carrying capacity of 3,500 tons on a draught of 18 ft. Her dimensions are: length over all, 260 ft.; length between perpendiculars, 252 ft. 6 in.; breadth, 43 ft. 6 in.; depth, 26 ft.; height between decks, 9 ft. 6 in. She will be fitted with triple expansion engines, cylinders 18, 29½ and 48 in. diameter, by 36 in. stroke, steam being supplied by two Scotch boilers 11 ft. over ends, and 13 ft. 9 in. diameter, inside measurement, at a working pressure of 180 lbs. The dining-room and engineers' quarters are aft, the stokers' and deckhands' quarters amidships, the cabins and the mates' quarters are forward, and the pilot house is on the captain's texas with parlor underneath. There will also be two staterooms forward with bathrooms, also separate bathrooms for officers and engineers, and a shower bath for the stokers. The vessel will be steered by telemotor connected with the steam steering gear aft. The cargo handling machinery will consist of steam capstan aft, two wire winches placed between hatches, steam windlass, etc. The steamer is intended for the general trade on the Great Lakes, and is expected to be on her route early in Oct. Capt. Crangle, the company's Marine Superintendent, expects to leave for Dundee early in Aug. to superintend the completion of the Steamer, which is to be named G. R. Crow.

Manitoba, Saskatchewan, Alberta, Etc.

Reports from Selkirk, Man., June 10, stated that owing to low water a number of steamers were aground at the mouth of the river.

The stern-wheel steamer City of Medicine Hat has been launched at Medicine Hat, Alta., for the Southern Alberta Navigation Co. The steamer draws two feet of water, is 120 ft. long, with a breadth of 25 ft., and has berth accommodation for 35 passengers, while on excursions she can carry 300. The steamer will be used for taking cement and lumber up the Bow River to the South Alberta Irrigation Co.'s works, and coal to Medicine Hat, Saskatoon and intermediate points. Capt. Ross is principally interested in the company.

The opening of navigation on Lake Winnipeg, May 24, brought about great activity among the marine interests at Selkirk, Man. Capt. Jas. Robinson has announced his retirement from marine life after many years' service. The Dominion Fish Co. will this season run only one steamer—the Premier—to Warren's Landing, and the Wolverine will engage in the fishing and lumber business during the year instead of being on the Norway House supply handling. Capt. Robinson has leased the Mikado and will run her in the lumber trade.

B.C. and Pacific Coast Marine.

The name of the str. Eagle, official number 121,981, registered at Victoria, B.C., has been changed by order-in-council to that of Stetson.

The first steamboat of the season left Whitehorse for Dawson, Yukon, June 4, and the first steamer for the season reached Nome, Alaska, June 5.

The Vancouver-Sechelt, B.C., ferry steamboat New Era went ashore at Roberts Creek, May 26, but was subsequently floated off practically uninjured.

A contract has been let to the British Columbia General Contract Co. for the construction of a wharf at New Westminster, for the Johnson Wharf Co. The estimated cost is about $60,000.

The Vancouver, B.C., longshoremen went on strike May 27, for an increase of 5 cents an hour, making 40 cents an hour for day work and 45 cents an hour for night work. This was granted by the shipping companies after work had been suspended for several hours.

It is suggested that a company be formed to construct a salvage steamer and dock at Seattle, Wash., capable of dealing with large ocean-going vessels. This is in view of the fact that at present such vessels cannot be dealt with there, but have to be sent to Victoria, B.C., for repairs.

The Dominion Government is installing additional lights and establishing life saving stations along the west coast of Vancouver Island. In connection with these works the B.C. provincial government is clearing a road from Carmanah to Cape Beale at a cost of about $40,000.

The Pacific Coast Steamship Co.'s new steamboat President arrived at Seattle, Wash., May 16, from the builder's yard, Camden, N.J. A sister ship named Governor was launched at the same yard May 25. The company operates a service between Seattle and San Francisco, Cal., with connections to ports on Puget Sound.

The New England Fish Co. is arranging to place orders on the B.C. coast for the construction of two steel fishing steamboats for its Pacific fishing station. The new vessels will be similar to the str. New England, built at Camden, N.J., 1897, but will be somewhat larger, having a length of about 150 ft., in place of the New England's 121.8 ft.

The new steamboat for the Dominion Government hydrographic service built in B.C., on her recent trial trip made nine knots an hour against the tide. The new quarantine steamer for the Pacific Coast has also been completed, and on her trial trip made 11 knots an hour. For description of the hydrographic survey steamer see Oct., 1906, pg. 607, and for plans see Nov., 1906, pg. 689.

The steamboat Queen City has been put on a route between Victoria, B.C., and the logging camps and settlements on the northeast coast of Vancouver Island. The boat calls at Sechelt, Bucaneer Bay, Pender Harbor, Van Anda, Lund, Shoal Bay, Rock Bay, Bear River, Salmon River, Port Neville, and Port Harvey. The Union Steamship Co. operates its str. Cassier on much the same route at present.

The C.P.R. steamboat Princess May had among its passengers from Ketchikan, Alaska, on a recent trip, a deserter from the U.S. fort at Fort Seward. The captain refused to allow the U.S. city marshal to use force to arrest the deserter. The commander of the fort has asked the War Department to demand, through the British Government, the return of the deserter, and that the captain of the steamer be punished. The acting Judge Advocate General has, it is stated, refused to take any action.

The Admiralty Court sitting at Vancouver, B.C., has decided in favor of the C.P.R. in

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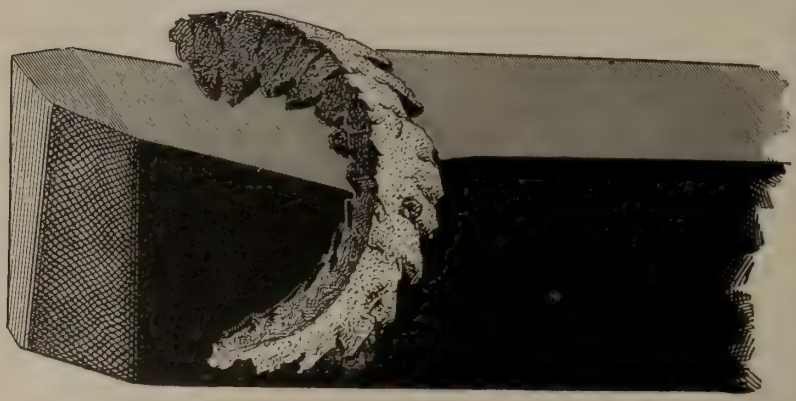

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the consolidated suit arising out of the collision between the Princess Victoria and the Union Steamship Co's tug Chehalis. The relatives of the nine persons who were drowned instituted actions for damages aggregating in all $200,000. The Department of Marine investigation resulted in the suspension of the certificate of Capt. Griffin of the Princess Victoria, and in the criminal proceedings in which a charge of manslaughter was laid against Capt. Griffin, who was acquitted.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM MAY 15, 1907, TO JUNE 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Adam	122,332	Vancouver, B.C., 1907	Screw 4 N.H.P.	45.0	12.0	5.7	24	16	Vancouver, B.C.	Bell-Irving Co., Ltd., Vancouver, B.C.
Ailsa Craig	122,337	" " "	" 1 "	24.8	8.8	2.5	9	6	" "	R. D. Craig, Vancouver, B.C.
Audrey	122,411	Midland, Ont., 1907	" 16 "	71.8	16.0	8.1	87	59	Midland, Ont.	Manley Chew, Midland, Ont.
Beaver	122,367	Ballard, Wash., U.S., 1892	" 16 "	51.4	13.7	5.7	38	26	Vancouver, B.C.	Jordan Riv. Lum. Co., Victoria, B.C.
Bobs	122,331	Vancouver, B.C., 1905	" ½ "	24.0	6.6	3.0	5	4	" "	W. Pinnock, Vancouver, B.C.
Brant	122,256	New York, U.S., 1905	" 15 "	31.4	8.0	3.4	6	5	Quebec, Que.	J. Knight Baswell, Quebec
Castor	122,474	Tor. & Pembroke, Ont., '07	Paddle 3 "	66.0	22.0	5.2	88	23	Ottawa, Ont.	Upper Ottawa Imp. Co., Ltd., Ottawa
Cauco	122,192	N. Westminster, B.C., 1896	Screw 2 "	33.3	6.3	4.3	5	3	N. Westminster, B.C.	H. Schaake, N. Westminster, B.C.
Commodore	122,363	Vancouver, B.C., 1907	" 52 "	119.6	26.1	14.5	318	216	Vancouver, B.C.	B.C.MillsTim.&Trad.Co.VancouverB.C.
Cruiser	122,368	Fir, Wash., U.S., 1907	" 1 "	29.0	9.2	4.3	12	8	" "	Davidson-WardCo.Ltd.,Vancouver,B.C.
Daphne	122,364	Lund, B.C., 1906	" 1 "	26.0	7.3	2.9	9	6	" "	W. R. Armson, Lund, B.C.
Dauntless	122,361	Bellingham,Wash.,U.S.1902	" 3 "	32.1	7.3	3.5	10	7	" "	Funnel Log. Co., Gibson's Landing, B.C.
Eau Claire	122,334	N. Vancouver, B.C., 1906	" 1 "	32.0	8.7	3.0	5	3	" "	G. R. Thomson, Vancouver, B.C.
Eve	122,333	Vancouver, B.C., 1907	" 5 "	45.0	12.0	5.7	24	16	" "	Bell-Irving Co., Vancouver, B.C.
Fashion	122,019	West Bay City, Mich., 1893	" 24 "	60.8	16.6	6.0	43	27	Ottawa, Ont.	Dominion Dredging Co., Ltd., Ottawa
Hattie Hansen	122,338	Pontiac, Wash., U.S., 1893	" 16 "	73.0	15.2	7.4	105	71	Vancouver, B.C.	Sechelt Steamship Co., Vancouver, B.C.
Helena	122,129	Halifax, N.S., 1906	" 3 "	39.0	9.0	4.8	13	9	Halifax, N.S.	G. E. Francklyn, Jr., Halifax, N.S.
Hercule	122,473	Hull, Que., 1905	" 1 "	39.0	8.6	3.0	15	10	Ottawa, Ont.	J. Hope, Hull, Que.
Imperial	121,945	Sorel, Que., 1907	" 192 "	200.0	41.9	30.0	1098	578	Sorel, Que.	St. Lawrence Can. Nav. Co., Montreal
M. Bradshaw	117,083	Benton Harbor, Mich., 1889	" 35 "	135.0	25.0	9.0	500	296	Collingwood, Ont.	H. Cleland, Collingwood, Ont.
Meteghan I	122,456	Meteghan, N.S., 1907	" 13 "	36.0	14.0	6.0	16	11	Yarmouth, N.S.	R. Robichan, Meteghan, N.S.
Miner	122,126	Jarrow-on-Tyne, Eng., 1880	" 16 "	65.0	14.6	6.8	49	33	Halifax, N.S.	Pt. Hood-Richmond Ry.C.Co., Pt. Hood
North-West	122,366	Portland, Ore., U.S., 1889	" 13 "	135.6	27.7	5.0	638	388	Vancouver, B.C.	B.C. Trans. & Com. Co., Vancouver, B.C.
Owlet	122,351	Kingston, Ont., 1907	" 1 "	43.6	11.0	4.7	16	11	Kingston, Ont.	J. B. Paterson & Co., Montreal
Pollux	122,475	Toronto & Pembroke, 1907	Paddle 3 "	66.0	22.0	5.2	88	23	Ottawa, Ont.	Upper Ottawa Imp. Co., Ltd., Ottawa.
Rover	121,918	Kenora, Ont., 1907	Screw 1 "	30.0	10.5	4.0	11	7	Kenora, Ont.	Dom. Fish Co., Portage la Prairie, Man.
St. Ann	122,365	Vancouver, B.C., 1906	" 1 "	28.6	8.2	3.6	7	5	Vancouver, B.C.	G. E. Cates, Vancouver, B.C.
Shamrock II	122,353	Kingston, Ont., 1907	" 5 "	45.4	9.2	3.9	10	6	Kingston, Ont.	J. H. Davis & Co., Kingston, Ont.
Swan	122,340	Vancouver, B.C., 1907	" 10 "	46.4	11.8	6.6	30	21	Vancouver, B.C.	G. W. Roberts, Vancouver, B.C.
T. M	122,362	Steveston, B.C., 1904	" 4/5 "	35.4	11.0	3.2	13	9	" "	T. Matsunaga, Steveston, B.C.
Talisman	122,339	Vancouver, B.C., 1907	" 1 "	30.1	9.5	4.0	9	6	" "	R. Haddon, Vancouver, B.C.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM MAY 15, 1907, TO JUNE 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alice	122,057	Shippigan Island,N.B.,1907	Schr.	37.2	13.2	11.3	15	15	Chatham, N.B.	S. Dugue, Shippigan, N.B.
Arcade	121,943	Pierreville, Que., 1907	Sloop	109.0	23.2	7.7	151	140	Sorel, Que.	W. Gill, Pierreville, Que.
Arthur	121,946	Sorel, Que., 1907	Barge	109.0	22.8	9.6	203	198	"	J. L. B. Leclaire, Sorel, Que.
Bertha A	122,453	Clyde, N.S., 1907	Sloop	34.0	11.0	6.0	12	12	Yarmouth, N.S.	T. Ross, Port la Tour, N.S.
Bertha M	122,127	Chester, N.S., 1906	Schr.	45.0	12.4	5.4	14	14	Halifax, N.S.	J. F. Rood, Halifax, N.S.
Canada	116,485	Wallaceburg, Ont., 1907	Barge	84.0	21.9	4.6	85	85	Wallaceburg, Ont.	D. Berton & W. S. McLean, Wallaceburg.
Daniel S	122,462	Cape Island, N.S., 1906	Sloop	32.0	10.6	6.0	10	10	Yarmouth, N.S.	A. P. Ross, Cape Island, N.S.
Derrick Scow 1	122,267	Montreal, Que., 1906	Scow	94.5	24.9	5.7	110	110	Montreal, Que.	Montreal Sand & Gravel Co., Ltd., Montreal
Emerald	107,372	Aspy Bay, N.S., 1899	Schr.	44.5	13.7	5.3	15	15	Sydney, N.S.	J. Curtis, Ingonish, N.S.
Eureka	121,944	Yamaska, Que., 1907	Sloop	106.0	23.2	6.9	116	104	Sorel, Que.	W. Gill, Pierreville, Que.
Eva E	122,461	Cape Island, N.S., 1906	"	30.0	10.6	6.0	10	10	Yarmouth, N.S.	M. Penney & Co., Cape Island, N.S.
Evangeline	122,058	New Bandon, N.B., 1907	Schr.	33.8	11.5	10.2	10	10	Chatham, N.B.	V. Fregault, New Bandon, N.B.
Falcon	122,304	La Have, N.S., 1907	"	79.2	23.2	9.2	85	85	Lunenburg, N.S.	E. B. Walters, La Have, N.S.
Gladys M	122,463	Surath Island, N.S., 1906	Sloop	30.0	10.6	6.0	10	10	Yarmouth, N.S.	J. C. Ross, Port la Tour, N.S.
Gladys S	122,305	La Have, N.S., 1906	Schr.	93.4	25.0	10.2	115	99	Lunenburg, N.S.	A. V. Conrad, La Have, N.S.
Hilda E	122,244	Grand Manan, N.B., 1906	Sloop	28.4	11.6	6.0	12	12	St. Andrews, N.B.	J. Moorehouse, Grand Manan, N.B.
Huron	107,687	Montreal, Que., 1902	Dred.	64.2	25.2	5.3	187	135	Prescot, Que.	E. A. D. Morgan, Montreal
Industry	122,454	Barrington, N.S., 1906	Sloop	31.0	11.0	6.0	11	11	Yarmouth, N.S.	S. S. Atwood, Barrington, N.S.
Irona	121,942	Pierreville, Que., 1907	"	109.2	23.2	7.5	141	128	Sorel, Que.	W. Gill, Pierreville, Que.
J. H. Redfern	122,472	Hull, Que., 1907	Barge	122.1	24.1	8.6	233	208	Ottawa, Ont.	Ottawa Transportation Co., Ltd., Ottawa
Justina	122,183	River Bourgeois, N.S., 1907	Schr.	35.0	10.5	5.2	10	10	Arichat, N.S.	I. Bandrot, River Bourgeois, N.S.
K. & W. No. 1	122,369	N. Westminster, B.C., 1899	Scow	55.0	19.2	5.1	50	50	Vancouver, B.C.	L. Wilson, New Westminster, B.C. and G. C. McKeen, Vancouver, B.C.
Keewaydin	94,853	Port Greville, N.S., 1889	Schr.	108.0	28.4	10.1	200	188	Halifax, N.S.	I. A. Hopkins, Halifax, N.S.
Lena A	122,459	Cape Island, N.S., 1906	Sloop	30.0	11.0	6.6	11	11	Yarmouth, N.S.	J. W. Flemmings, Port la Tour, N.S.
Lila A	122,458	" " "	"	32.0	10.6	6.0	10	10	" "	H. A. Atkinson, Cape Island, N.S.
Little Jane	122,059	Miscow Island, N.B., 1907	Schr.	37.0	13.6	12.0	15	15	Chatham, N.B.	J. M. Wood, Miscow, N.B.
Lizzie A	122,455	Pubnico, N.S., 1907	"	60.0	15.6	8.0	33	33	Yarmouth, N.S.	E. M. D'Entremont, Pubnico, N.S.
Mary Elizabeth	122,182	River Bourgeois, N.S., 1907	"	34.4	12.0	4.8	11	11	Arichat, N.S.	P. Burke, River Bourgeois, N.S.
Minnie Laura	122,234	Clark's Harbor, N.S., 1907	Sloop	36.0	10.8	6.3	11	11	Barrington, N.S.	J. Brown, Wood's Harbor, N.S.
Nema and Millie	122,457	Cape Negro, N.S., 1907	"	30.0	11.0	6.0	11	11	Yarmouth, N.S.	S. Slate, Cape Negro, N.S.
No. 1	122,125	Mahone Bay, N.S., 1906	Dred.	60.5	25.8	5.7	153	153	Halifax, N.S.	H. Beazley, Halifax, N.S.
Olga A	122,451	Shelburne, N.S., 1906	Sloop	30.0	10.6	6.0	10	10	Yarmouth, N.S.	R. Lowe, Cape Island, N.S.
Olive	122,055	Shippigan, N.B., 1907	Schr.	37.4	13.0	5.6	14	14	Chatham, N.B.	A. Dugue, Shippigan, N.B.
Portia	122,281	Shelburne, N.S., 1907	"	75.0	21.0	8.2	65	65	Shelburne, N.S.	B. Barbour, Bonavista Bay, Nfld.
Pump Scow No.1	122,266	Montreal, Que., 1906	Scow	49.5	22.8	4.3	79	79	Montreal, Que.	Montreal Sand & Gravel Co., Ltd., Montreal
Pump Scow No.2	122,265	" " "	"	49.8	22.8	4.3	73	73	" "	" " " " "
Reliance	122,128	Dartmouth, N.S., 1907	Schr.	45.0	12.8	5.9	18	18	Halifax, N.S.	C. Robertson, Heron Island, N.B.
R. C. Blackburn	122,020	Hull, Que., 1907	Barge	122.1	24.1	8.6	233	208	Ottawa, Ont.	Ottawa Transportation Co., Ltd., Ottawa
Sadie H	122,307	Tancook, N.S., 1907	Schr.	45.8	12.8	6.6	17	17	Lunenburg, N.S.	P. Boutilier, Blandford, N.S.
Scow No. 2	122,268	Montreal, Que., 1906	Scow	109.0	28.0	7.1	172	172	Montreal, Que.	Montreal Sand & Gravel Co., Ltd., Montreal
Scow No. 3	122,269	" " 1903	"	97.2	25.1	6.0	119	119	"	" " " " "
Scow No. 6	122,270	Grenville, Que., 1906	"	103.7	30.0	6.4	165	165	"	" " " " "
Scow No. 7	122,401	Montreal, Que., 1906	"	107.4	30.6	6.4	171	171	"	" " " " "
Scow No. 8	122,402	" 1907	"	109.2	29.4	6.8	174	174	"	" " " " "
Scow No. 9	122,403	" " 1907	"	109.6	29.0	6.9	175	175	"	" " " " "
Shannon	122,303	La Have, N.S., 1907	Schr.	66.4	21.3	7.8	63	63	Lunenburg, N.S.	J. Bell, Dublin Shore, N.S.
Sunbeam	122,056	Shippigan, N.B., 1907	"	38.6	13.2	12.0	14	14	Chatham, N.B.	William Fruing Co., Ltd., Jersey, Eng.
Togo	117,086	Lachine, Que., 1897	Dred.	84.0	26.0	7.6	247	168	Collingwood, Ont.	R. Weddell, R. J. Weddell, Trenton, Ont. and J. J. Manly, Merritton, Ont.
Undaunted	122,306	Lunenburg, N.S., 1907	Schr.	38.2	12.7	6.4	15	15	Lunenburg, N.S.	E. Risser, West Dublin, N.S.
Virginia	122,452	Tusket Wedge, N.S., 1907	Sloop	36.0	13.0	7.0	17	17	Yarmouth, N.S.	C. R. Pathier, Tusket Wedge, N.S.
V. T. B. 1	122,335	Nor. Vancouver, B.C., 1907	Scow	86.2	30.2	9.0	209	209	Vancouver, B.C.	Vancouver Tug & Barge Co., Vancouver
V. T. B. 2	122,336	" " "	"	86.6	30.7	9.0	212	212	" "	" " " " "
Welford H	122,150	Clyde, N.S., 1907	Sloop	33.0	10.4	6.0	11	11	Yarmouth, N.S.	N. Horton, Port la Tour, N.S.
W. H. Grafftey	122,471	Hull, Que., 1907	Barge	122.1	24.1	8.6	233	208	Ottawa, Ont.	Ottawa Transportation Co. Ltd., Ottawa

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Marine Service Votes for 1907-08.

The Dominion Parliament, at its recent session, passed votes for various services affecting the marine interests. These votes were submitted by the Department of Trade and Commerce, the Department of Marine and Fisheries, and the Department of Railways and Canals, and include revenue as well as capital expenditures. The following figures give the principal votes for the different services:

MAIL SUBSIDIES AND STEAMSHIP SUBVENTIONS.	
Ocean and mail service between Canada and Great Britain	$ 650,000
Seven other services between Canada and Great Britain	138,900
Canada-South Africa line	170,000
Canada-Australian line	180,508
Canada-New Zealand line	50,000
Canada-Mexico line	100,000
Canada-West Indies and South American line	80,700
Twenty-seven services in the Maritime Provinces, including a service to Newfoundland	125,125
Nine services in Quebec	65,525
One service in Ontario	1,500
Six services on the Pacific Coast	22,750
LIGHTHOUSE AND COAST SERVICE.	
Salaries and allowances	$ 285,000
Agencies, rents, etc.	30,000
Maintenance and repairs	686,500
Construction, etc.	1,360,000
Additional Marconi stations	106,240
Georgian Bay buoy service	45,000
To provide lighthouse tender for Georgian Bay	150,000
Icebreaking in Thunder Bay	24,000
Maintenance of dockyard	40,000
To provide telephones at lighthouses, etc.	33,500
General works	1,000
Miscellaneous items	63,000
OCEAN AND RIVER SERVICE.	
Maintenance and repair of Government steamers and icebreakers	$ 657,400
Icebreaking steamer for Northumberland Straits	150,000
Examination of masters and mates	19,600
Rewards for saving life	31,600
Investigations into wrecks	9,000
Schools of Navigation	9,500
Wrecking plants at Quebec, the Maritime Provinces and B.C.	30,000
Patrolling northern waters	50,000
Patrol boat for Hudson Bay	32,000
Miscellaneous items	82,249
Marine Hospitals generally, including relief of shipwrecked and distressed seamen	53,000
Towards providing a marine hospital at Yarmouth, N.S.	7,500
Steamboat inspection	47,500
General surveys, etc	22,840
Hydrographic surveys	170,000
Construction and equipment of hydrographic survey steamer for British Columbia	153,000
QUARANTINE SERVICE.	
Station at Lawlor's Island, Halifax, N.S., winter hospital, electric light, repairs, etc	$ 10,000
Immigrant detention building, Halifax	12,000
Improvements and repairs at Gross Isle, Que., station	12,000
Disinfecting apparatus	16,000
Improvements at William's Head station, B.C.	10,000
WATERWAYS COMMISSION.	
Deep waterways	$ 16,000
International Commission Red River of the North	4,000
International Commission, St. John River, N.B.	16,000
RIVER ST. LAWRENCE SHIP CHANNEL.	
Capital expenditure	$ 760,000
Purchase of yard at Sorel	30,000
Dredge Beaujeu	180,000
Additional plant at Cap a la Roche	60,000
Signal service	14,400
Permanent piers	96,000
CANALS.	
Surveys and inspections	$ 3,000
Staff and repairs	931,216
Statistical office	27,425
Miscellaneous	25,000
BEAUHARNOIS CANAL.—Repairing leak	6,000
CARILLON AND GRENVILLE CANAL.—Macadamizing road, etc	11,830
CHAMBLY CANAL.—St. Johns harbor improvements	5,000
Macadamizing tow paths, etc	16,200
General repairs	71,120
CORNWALL AND OTHER ST. LAWRENCE CANALS.—Enlargement	2,000
CORNWALL CANAL.—Making plans	1,000
Building gate lifter	12,900
Other improvements	15,600
GALOPS CANAL.—Final estimate	$ 12,000
Stopping leak	5,700
Rebuilding retaining walls	15,000
GALOPS RAPIDS.—Final estimate	3,540
LACHINE CANAL.—Dredging	15,000
Electrical installation	4,750
Rebuilding slope walls	18,070
Wall at Warehousing Co.'s basin no. 2	27,150
Various works	58,000
MURRAY CANAL.—Rebuilding piers of concrete	55,000
NORTH CHANNEL.—Final estimate	5,100
QUEBEC CANALS.—To purchase cement	31,000
To build scows	14,600
Surveys, etc	500
RIVER ST. LAWRENCE.—To remove shoals at upper entrance to Galops Canal	5,600
RIDEAU CANAL.—To complete purchase of tug	5,775
Compensation re breaking of Poonamalie dam	13,133
STE. ANNE'S LOCK.—General repairs	2,700
ST. OUR'S LOCK.—New boom, gates, etc.	5,600
SAULT STE. MARIE CANAL.—Construction	30,000
SOULANGES CANAL.—Improvements, etc.	7,266
Lock gates lifter	9,600
Lodging for electrical staff	4,600
General repairs, etc	7,600
TRENT CANAL—Damages by flooding	4,890
Rebuilding dam at Peterboro	19,016
Dam at Bobcaygeon	22,000
Road across McLaren's Creek	2,000
Dam at Buckhorn	28,000
Dam at Lovesick	8,000
Improvements general	42,500
New boat for towing	15,000
Construction and surveys	756,860
WELLAND CANAL.—Electric lighting	10,000
Removing center piers and rebuilding bridges	14,000
Turning basin and culvert at Welland	12,000
Widening canal, Welland	15,000
Surveys	2,000
Port Colborne entrance	40,000
" elevator	127,400
Port Maitland improvements	32,000
Port Dalhousie dredging	4,000
Retaining wall in rock cut	56,000
Miscellaneous	25,000
DREDGING.	
Dredge vessel repairs	$ 120,000
New plant generally	150,000
General service	5,000
New plant, Maritime Provinces	55,000
" Ontario and Quebec	100,000
" Manitoba	30,000
" British Columbia	120,000
Dredging, Maritime Provinces	170,000
" Ontario and Quebec	240,000
" Manitoba	25,000
" British Columbia	50,000
HARBOR AND RIVER WORKS.	
Generally in the Dominion	$ 10,000
" Nova Scotia	30,000
" New Brunswick	17,000
" Quebec	6,400
" Ontario	5,000
" Manitoba	6,000
" Saskatchewan and Alberta	5,000
" British Columbia	1,000
Improvements, repairs, etc., to wharves, piers, dredging channels, etc., at—	
22 points in Prince Edward Island	108,250
76 " Nova Scotia	215,360
40 " New Brunswick	328,000
127 " Quebec	829,830
50 " Ontario	697,280
14 " Manitoba	36,700
21 " British Columbia	124,500
Improving Lewis and Yukon Rivers, Yukon Territory	7,500
Quebec city improvements	56,000
Port Arthur and Fort William improvements	100,000
Red River Improvements, St. Andrew's Rapids	40,000
Montreal harbor Lower Division improvements below St. Mary's Current	137,500
Port Colborne, Ont., harbor improvements	27,100
GEORGIAN BAY TO MONTREAL.	
Survey for waterway via French and Ottawa Rivers, including payments authorized	$ 53,000

Notices to Mariners.

The Department of Marine has issued the following notices to mariners:

No. 29. April 25.—Alaska. — 81. Tongrass narrows, Idaho rock, float light established.

No. 30. April 30.—British Columbia—82. Vancouver Island, southeast coast, Victoria harbor, middle rock beacon, Shoal point beacon, lights improved. 83. Vancouver island, east coast, off Kelp bar, bell buoy replaced by gas and bell buoy. 84. Broughton strait, Neill ledge, change in character of buoy. 85. Queen Charlotte sound, Pine island, lighthouse established.

No. 31. April 30.—Nova Scotia—86. Bay of Fundy, Brier island, northwest ledge, bell buoy to be replaced by gas and whistling buoy. 87. Southwest coast, Cape Sable, southwest ledge, gas and whistling buoy established. 88. South coast, Jig rock, bell buoy established. New Brunswick—89. Miramichi river, middle island light, change in illuminating apparatus

No. 32. April 30.—Ontario—90. Georgian Bay, west side, Surprise shoal, gas whistling and bell buoy established.

No. 33. May 2.—New Brunswick—93. South coast, Bay of Fundy, Musquash, Cape Spencer, changes in colors of lighthouses. Nova Scotia—94. South and west coasts, changes in colors of lighthouses.

No. 34. May 4.—Quebec—96. Gulf of St. Lawrence, Gaspe coast, Mont Louis bay, buoy discontinued. 97. River St. Lawrence, Red islet bank, buoy established. 98. River St. Lawrence, ship channel between Quebec and Montreal, Lake St. Peter, curve no. 2, lights not shown from range lighthouses, lightship replaced in position.

No. 35. May 8.—Ontario—99. Detroit river, Limekiln crossing, channel to be used by upward bound vessels.

No. 36. May 8.—New Brunswick—101. Bay of Fundy, change in position of Old Proprietor gas and whistling buoy.

No. 37. May 10.—Nova Scotia—103. Gulf of Canso, ship rock, change in character of buoy.

No. 38. May 10.—British Columbia—105. Chatham sound, shallow depths in the eastern approach to Brown passage.

No. 39. May 13.—Quebec—107. River St. Lawrence, mouth of Saguenay River, Prince shoal lightship, change in sounding of fog alarm.

No. 40. May 17.—Nova Scotia—108. South coast, Tor bay, Cole harbor, light established. Prince Edward Island—109. South coast, Charlottetown harbor, Warren farm range lights established.

No. 41. May 21.—Quebec—Chaleur Bay, north side, lighthouse moved from Point Echouerie to Bonaventure point.

No. 42. May 22.—New Brunswick—111. South coast, Bay of Fundy, St. John harbor entrance, off southeast end of Partridge Island, gas and whistling buoy established. Nova Scotia—112. West coast, off Brier Island, southwest ledge, color of gas and whistling buoy. 113. Halifax harbor, Campperdown, time signals. 114. South coast, off New Harbor Head, bell buoy replaced by whistling buoy.

The following have been issued by the U.S. Hydrographic Department:

No. 20. May 18.—Lake Erie—907. Detroit river, Limekiln crossing lights changed. 908. Detroit River light, characteristic changed.

No. 21. May 25.—Lake Superior—947. Duluth-Superior harbor, rules and regulations changed. St. Mary's river—950. Hay lake channel, buoys moved and established. 951. Mud lake, Pointe aux Frenes gas buoy to be discontinued. Lake Erie—953. Detroit river, Limekiln crossing, temporary channel, buoys and range marks.

No. 24. June 15.—St. Mary's River—1065. Amendment to rules and regulations governing the movement and anchorage of vessels. Detroit River—1066. Belle Isle, wreck to eastward, further information. Lake Erie—1072. Ashtabula harbor entrance, hydrographic information.

The new British Shipping Act, which came in force July 1, makes one important change which will affect the Canadian marine; this is the regulation regarding the signing on and off of crews.

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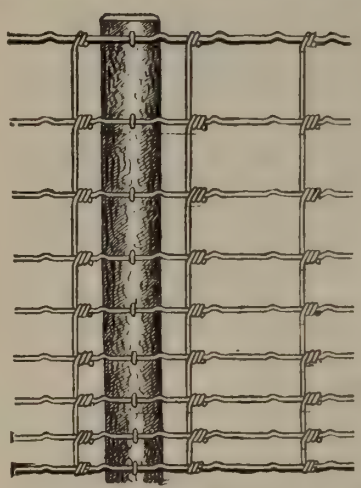

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Canadian Fog Signals

Col. Anderson, Chief Engineer of the Department of Marine, wrote recently in regard to fog signals as follows: "We are not establishing any additional explosive signal stations for the reason that the explosive signal is too short in duration and too difficult and expensive to operate frequently. Its only advantages are that it can be quickly installed and requires no machinery nor skilled labor to operate it. However, the cost for explosives is so great that in the long run any other fog alarm becomes more economical and more effective. We have many times made comparative tests of different fog signals, and the results of these tests are embodied in our several annual reports. Probably the most extensive one will be found in our annual report for 1891, when the late Capt. Smith and myself tested guns against whistles, and whistles against horns. Since that time we have developed a modification of the siren called the diaphone, which has given greater sound penetration than any of the sound-producing machines hitherto used. It is operated somewhat in the same way as the siren, with compressed air, and has beaten the siren in penetration at all distances and in all directions. With reference to the question of silent zones I am quite sure that it is impossible to overcome these either by changing a fog signal or by any disposition of trumpets. The silent zones are caused by deflection of sound in consequence of irregularities in the atmosphere, and these irregularities are altogether beyond the control of human agency. If the efficiency of a fog signal at any station is persistently nullified by the existence of silent zones, the only remedy is to move the station.

It has been my experience that we may expect silent zones wherever there is broken ground in front of the fog alarm or great irregularities in the depth of the water between the station and the observer. The proper location of a fog alarm station is, therefore, a matter for close examination and deep study on the part of the locating engineer, but even after all precautions have been taken unfavorable results may be found."—Pacific Marine Review.

Norwegian Vessels in Canada.

The Norwegian Vice-Consul at Quebec, Que., in a recent report to his Government gives some interesting information as to the share taken by Norwegian vessels in the Canadian trade. The trade carried on by Norwegian vessels with Canada has been constantly and considerably increasing of late years. In the year ended June 30, 1906, 1,389 Norwegian vessels cleared inwards at Canadian ports, the tonnage capacity of which vessels amounted to 1,918,349 register tons; in the same year the outward clearances were 1,404 vessels, of 1,910,788 register tons. Out of the total number, 200 were sailers, with an aggregate measurement of 140,000 register tons. Of the 1,389 inward clearances, 663 vessels were engaged in the coasting trade, and 726 in the oversea trade; and, in the outward clearances, 675 and 729 respectively. The Norwegian vessels which make oversea voyages to Canada are engaged partly in the exportation of coal to Newfoundland and the United States, and partly in the exportation of timber to Canadian, American and West Indian ports. The Norwegian ships engaged in the Canadian coasting trade are employed exclusively in the transport of coal from Cape Breton to (for the most part) the ports of Quebec and Montreal. In this traffic 663 Norwegian vessels, measuring 984,121 register tons, were engaged in the year 1905-6.

The Department of Marine has issued an index to the notices to mariners issued in 1906.

International Mercantile Marine Co.

The annual report for 1906 shows total earnings of $37,187,809, and total expenses of $29,155,178. These figures show a gain of gross earnings of $3,824,891, and of net earnings of $2,125,887 over 1905. During the year four steamships which could not be profitably employed were sold and the proceeds invested in new tonnage. The number of steamships now in service, including the subsidiary lines, is 123, representing a gross tonnage of 1,015,761 tons. Arrangements have been made for adding nine new steamships aggregating 127,530 tons as follows: (1) An express, mail, passenger and cargo steamship for the North Atlantic trade which, the report states, in point of luxury and size will far surpass anything hitherto attempted. (2) A passenger and cargo steamship, also for the North Atlantic trade. (3) A passenger and cargo steamship for the Atlantic Transport Line, New York-London service. (4 and 5) Two mail-passenger and cargo steamships for the Dominion Line, Canadian service. (6) A large passenger and cargo steamship designed for the London-Australian trade. (7, 8 and 9) Three steamships for Leyland Line. The steamships were operated during 1906 without any total loss or serious casualty, and the insurance fund shows a profit for the year of $791,959. Passengers carried 473,051, against 418,149 in 1905.

Among the Express Companies.

W. A. Dawes has been appointed Canadian Northern Ex. Co.'s agent at Regina, Sask.

The Canadian Ex. Co. re-issued its transfer tariff to points in Nova Scotia and New Brunswick, under date May 22.

The National Ex. Co., by a new power of attorney, has appointed R. Murphy, 94 McGill St., Montreal, its chief agent in Quebec Province.

The American Ex. Co., by a new power of attorney, has appointed R. Murphy, 94 McGill St., Montreal, its chief agent in the Province of Quebec.

G. J. Bothwell, heretofore depot agent Canadian Northern Ex., Winnipeg, has been appointed route agent of that company with headquarters at Winnipeg.

E. J. Archer heretofore correspondent Dominion Ex. Co., Ottawa, Ont., has been appointed to a similar position with the Canadian Northern Ex. Co. at Winnipeg.

The Canadian Northern Ex. Co. inaugurated an exclusive messenger service on the C.P.R. main line west of Winnipeg, and on the Regina-Prince Albert branch, June 1.

The Northern Ex. Co. has withdrawn from Winnipeg, Man., closing its joint offices with the Canadian Northern Ex. Co. Transfer will take place at the International boundary at Emerson, Man.

L. B. Allan for some years chief clerk to the Superintendent of Tariffs, Dominion Ex. Co., Toronto, has been appointed to take charge of the Canadian Northern Ex. Co.'s tariff department at Winnipeg.

The Dominion Ex. Co. has placed its service on the Nicola, Kamloops and Similkameen Coal and Ry. Co.'s line (leased to the C.P.R.), reaching the following points: Canford, Cartwright, Coutlee, Dot, Merritt, Nicola, B.C.

The Great Northern Ex. Co. has opened a route on the Midland Ry. of Manitoba, from the International boundary near Neche, N.D., to Portage la Prairie, Man. It has opened offices at West Gretna, Plum Coulee, Roland, Carman and Portage la Prairie.

The United States Ex. Co. has entered into an arrangement with the Detroit United Ry. for the operation of an express business on its system. The D. U. Ry. operates the Sandwich, Windsor and Amherstburg Ry., and is constructing the Windsor and Tecumseh Ry. in Canada.

The Canadian Northern Ex. Co. has succeeded the Dominion Ex. Co. on the Qu'Appelle, Long Lake and Saskatchewan Ry. between Regina and Prince Albert, Sask., opening offices at the following points: Bethune, Bladsworth, Chamberlain, Condie, Crail, Davidson, Disley, Duke Lake, Dundurn, Girvin, Hague, Hanley, Osler, Lumsden, Regina, Rosthern, Saskatoon and Prince Albert.

Counsel for the Canadian and Dominion Ex. Companies applied to the Board of Railway Commissioners, May 31, and asked that the examination into their companies' rates, etc., should not begin until after the summer as they were not ready to go on. An order was made adjourning the inquiry until Nov. 1, it being understood that there should be no increase of the rates at present in force in the meantime.

The Canadian Ex. Co., which operated a route on the Midland Ry. of Nova Scotia, has ceased to do so, that line having been acquired by the Dominion Atlantic Ry., and has closed its offices at Brooklyn, Clarksville, Kennetcook, South Maitland and Windsor, N.S. The Maritime Ex. Co., which operates on the Dominion Atlantic Ry., has opened a route on the Midland Division, replacing the Canadian Ex. Co.

The Canadian Northern Ex. Co. has opened offices at the following points on the Muskoka Lakes for the tourist season: Foote's Bay, Gordon Bay, Hamill's Point, Lake Joseph or Barnsdale, Port Cockburn, on Lake Joseph; Bala, Bala Park, Beaumaris, Mortimer's Point, Torrance, on Lake Muskoka; Juddhaven, Mariner's House, Port Sandfield, Rosseau, Royal Muskoka, Windermere, and Woodington, on Lake Rosseau.

The express service which has been established on the Halifax and South-western Ry., is under the charge of P. Mooney, General Freight and Passenger Agent, Halifax, N.S. Offices have been established at Alpena, Arcadia, Argyle, Barrington Passage, Belleville, Bridgetown, Bridgewater, Brookfield Mines, French Village, Granville Ferry Hemford, Hubbard, Central Argyle, Chester, Chester Basin, East Pubnico, Ingram Port, Liverpool, Lockport, Lower Argyle, Lunenburg, Mahone Junction, Midway, Middleton, New Germany, Nictaux, Port Clyde, Pubnico, Shelburne, Springfield, Tusket and Yarmouth, N.S.

The Manitoba Court of Appeal has given a decision in favor of the express company in the case of Cosintino against the Dominion Ex. Co. The plaintiff, a resident of Winnipeg, claimed he had sent by mail to Toronto, currency amounting to $1,010, which he had enclosed in one of the Dominion Ex. Co.'s remittance envelopes. The postal authorities being unable to find the addressee, the letter was sent to the dead letter office, and their records showed that it had been returned to the express company at Winnipeg, because of the envelope used by the sender. This was the last heard of the letter, and the plaintiff brought suit against the express company to recover. The latter denied its liability, contending that there was no duty as between it and the plaintiff to become responsible for the money, which it denied ever having received. The trial judge found for the plaintiff for $1,000, but the decision of the Court of Appeal reverses this decision and finds the express company not liable.

The coal section of the Retail Merchants' Association meeting at Toronto June 13, decided to ask the Board of Railway Commissioners to make the railway companies responsible for the shortage of weight on cars of coal on arrival at their destination.

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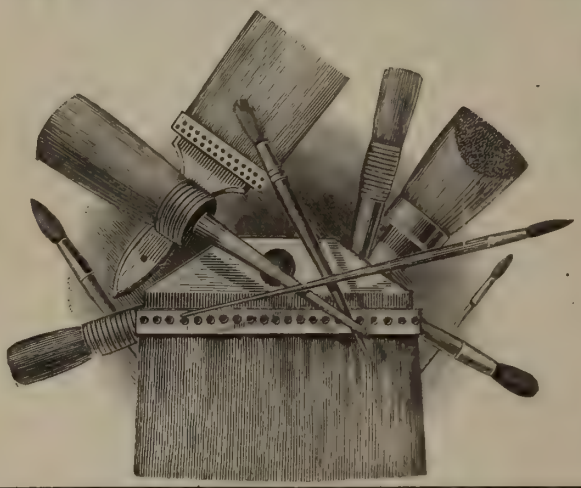

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Telegraph and Cable Matters.

The C.P.R. Telegraph Department has opened an office at Ebor, Man.

The C.P.R. Telegraph Department has opened an office at the military camp at Petawawa, Ont.

The Dominion Government telegraph line is being extended from Aberdeen, on the Skeena River, to Prince Rupert, B.C., about 30 miles.

The Newfoundland Government is being asked to extend the local telegraph system along the north-east coast to Cape Norman, or along the north-west shore from Bonne Bay.

The G.N.W. Telegraph Co. has opened offices at Bannerman, Desford, Boissevain, Minto, Brandon, West Gretna, Bergman, Plum Coulee, Roland and Portage la Prairie, Man.

The G.N.W. Telegraph Co. and the C.P.R. Telegraph Department put in force a new tariff June 13, on messages to the U.S., the new rates showing an increase of from 25 to 60 %.

F. B. Rushworth who has been in charge of the Marconi Wireless Telegraph station at Cape Bear, P.E.I., during the winter, has been transferred to the station at Sable Island, N.S.

At the 26th annual session of the Association of Railway Telegraph Superintendents, held at Atlantic City, N.J., June 19 and 20, a paper on the "Visible Supply of Telegraph Poles," was read by W. W. Ashald, Superintendent Telegraphs G.T.R., Montreal.

R. Peake was presented with a travelling bag by the Western Union Telegraph Co.'s employes at St. John, N.B., June 1, on leaving that company after 23 years' service to join the C.P.R. telegraph service at North Bay, Ont.

The Marconi Wireless Telegraph Co. is arranging to establish a station at some point on Queen Charlotte Islands, as well as other points in B.C. The C.P.R. steamboats Princess May, Princess Royal and Anne, will also be equipped with wireless apparatus.

The Newfoundland Legislature at its recent session voted $12,472 for the telegraphic central department at St. Johns, $25,376 for the operators at 99 different points in the colony, $8,328 for the repairing staff at 24 points, $12,000 for contingencies, $14,000 for telegraphic construction, and $372 for some extra services not previously provided for.

The Marconi Wireless Telegraph Co. has completed the erection of a wireless station at North Sydney, N.S. The station is for use in connection with the mail steamers entering Sydney during the summer months. The contract also provides for the operation of a station at Pictou, N.S., during the winter in connection with the Prince Edward Island traffic.

C. H. Reynolds, General Manager of the Pacific Cable Board, in an interview in London, recently, said the deficiency on the year's account will show a large reduction on the previous year, giving the hope that in the course of a few years it will be wiped out altogether. This deficiency includes an annuity of nearly £50,000 towards the repayment of capital.

The city of Winnipeg will receive tenders for the equipment of its power generating plant at Point du Bois, and the transmission line, including a telephone line, to Sept. 4.

The St. Maurice Valley Ry. has filed its local standard passenger tariff no. 1, for stations between Three Rivers and Shawinigan Falls, Que., at the rate of 3c. per mile. The tariff is signed by R. Kerr, Passenger Traffic Manager, who is also C.P.R. Passenger Traffic Manager.

General Telephone Matters.

The Bell Telephone Co. has opened a local exchange at Qu'Appelle, Sask.

The Coquitlam-Burnaby Telephone Co. is applying for a franchise in New Westminster, B.C.

The East Toronto, Ont., village council has granted a 25 year franchise to the Independent Telephone Co.

The Temiskaming Telephone Co. declared a dividend of 5% at the annual meeting recently held at New Liskeard, Ont.

The Warman Telephone, Light and Power Co. has been incorporated under the North-West Territories' ordinance respecting companies, at Regina, Sask.

A private telephone line connecting Bamberg and Crosshill with Wellesley, Ont., has been completed and is in operation. Dr. Glaister, Wellesley, is the principal promoter.

The St. Mary's, Kirkton and Exeter Telephone Co. is preparing to extend its line from Farquhar to Exeter, Ont. It is expected to have the line in operation during the summer.

The Premier of Manitoba denies that there is any truth in the press reports that the Government will acquire the Bell Telephone lines in the Province. The Government, he says, will positively construct an independent system.

The Manitoba Government has purchased a site at the corner of McDermot and Charlotte streets, Winnipeg, on which it is proposed to erect a central exchange for the city, and a terminal station for its projected long distance lines.

The Brantford, Ont., City Council has voted $5,000 in aid of the Bell memorial project. Including this grant, $32,000 has been provided out of the $40,000 required to purchase and lay out the old Bell homestead as a public park.

It was stated in Brandon, Man., June 7, that the Provincial Government proposed to proceed at once with the construction of a telephone system in that city, and of a long-distance line from Brandon to Virden, Hamiota and Birtle, connecting up the systems of the various local municipalities en route.

The Ontario Government by order-in-council has approved of the Ottawa City Council's by-law granting a five years' franchise to the Bell Telephone Co. This approval is required under the Ontario Act of 1907, where an agreement is proposed to be made between a municipality and a company operating under a Dominion charter, and outside of Provincial control.

The St. Martin's Telephone Co. has decided to extend its lines to Ten Mile Creek, N.B., and is considering a proposal to replace the instruments at present in use with more modern ones. Following are the officers and directors for the current year: President, C. M. Bostwick; Vice-President, W. E. Skillen; Secretary and Manager, A. D. McMackin; other directors, W. M. Jarvis, R. O. Stockton, C. E. Trueman.

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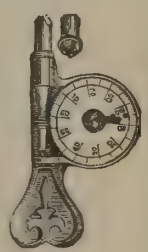

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Also Solid Staybolt Iron made from the best double refined charcoal iron.

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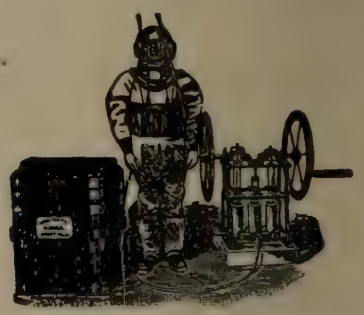

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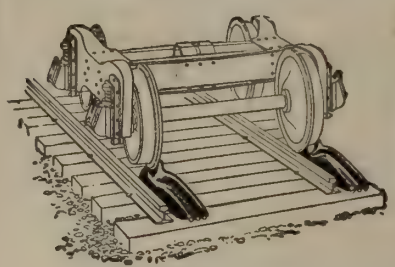

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In Special Excursion Pullman Cars. Very low one way second class Colonist rates to California and intermediates—$33 from Chicago, March 1 to April 30, and Sept. 1 to Oct. 31, 1907, honored in Pullman Excursion cars. Special homeseekers round trip rates to the South and Southwest at rate of one fare plus $2.00 or less.

Tourist rates to Arizona, Mexico, and California, liberal stopover privileges. Rates via New Orleans as low as via any other route. Look the Illinois Central map over and consult

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EVERY KIND——————EVERY CAPACITY

MILLER BROS. & TOMS, MONTREAL, CANADA

The Bell Telephone Co. has notified the Lindsay, Ont., Board of Trade that it is considering the proposal to extend its lines to Grass Hill in order to reach Woodvale and points in the vicinity. The company could not, it was also stated, consider the extension of its lines to Burnt River, Kinmount, Gelert, Minden and Haliburton, except on the plan recently adopted in connection with the line between Lindsay and Dunsford.

The Central Telephone Co. closed its transfer books May 25, and has transferred them to the New Brunswick Telephone Co., with which it has been amalgamated. A dividend of 2% has been paid to the shareholders of the C. T. Co., whose shares had been fully paid up before Oct. 31, 1906. Stock certificates of the new company will be issued at once, and a meeting of the shareholders of both companies will be held early in July to complete the amalgamation.

The St. Mary's-Medina Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $40,000 and offices at St. Mary's, Ont., for the purpose of carrying on a general telephone business in the counties of Perth, Oxford and Middlesex. The provisional directors are: W. J. Atkinson, E. McKim, J. W. Stewart, J. Kirk, of East Nissouri tp., Oxford county; W. F. Brown, J. Pool, J. B. Thompson, W. A. McIntyre, of St. Mary's, Ont.

The Byron Telephone Co-operative Association held its annual meeting at Byron, Ont., June 3. The report showed 35 miles of line, 850 poles, about five tons of wire, and 60 instruments installed; 113 shares sold at $30 a share to 51 shareholders. The auditors' report showed $3,117.49 cash receipts and $2,996.30 expenditures. Following are the officers and directors for the current year: President, Col. McEwen; Vice-President, H. Wickerson; Secretary-Treasurer and Manager, A. J. Rollins; these, with A. Kains and W. Merriam, form the Committee of Trustees. It is expected to extend the lines to Lambeth, Tempo, White Oak and Komoka during the current year.

The routes of the long distance telephone lines which the Manitoba Government proposes to construct in the province have not been finally approved. There are to be three trunk wires strung, one in the southwest part of the province, one in the northwest part, and the third through the centre. The Government proposes to furnish the municipalities with the material for the construction of the local lines, and the equipment of the exchanges. Already the local municipalities have arranged for the construction of something like 3,000 miles of line. The local systems at present arranged for are: Wordsworth, with three exchanges; Brandon, three exchanges; Wallace, three exchanges; Victoria, Maniota and Blanchard, one exchange each. The Winnipeg system, it is expected, will have a capacity of 15,000 instruments, and will be constructed by the Government. A number of the local lines are expected to be completed Nov. 1.

The Belleville-Prince Edward Bridge Co. will apply next session of the Dominion Parliament, for an act authorizing a new maximum schedule of rates and tolls to be charged persons using the bridge.

Arrangements are being made between the Department of Railways and the Department of Marine, by which through tickets will be issued from the mainland to points in P. E. I. during the winter. Heretofore passengers to the Island could only obtain tickets to Pictou, N. S., on the Intercolonial Ry.; buy a steamship ticket there for the Government S.S. Stanley, and a ticket for the P.E.I. Ry., on arriving at the Island port.

Nova Scotia Telephone Co. Ltd.

Following is the annual report for the year ended Jan. 31, 1907. The policy of the company has been to meet the telephone requirements of the Province, and to give an up-to-date and efficient service at the lowest rates possible. During the past year the growth of the company's business was phenomenal, and all indications point to a continued development. On Feb. 1, 1906, the company had in use in connection with its system 4,009 telephones, while on Feb. 1, 1907, the number had reached 5,016, a gain of over 25%. A fine stone building has been erected in Amherst to provide for rapidly growing business. The increase in the number of Amherst subscribers during the year was over 43%. The company has recently purchased a building and lot of

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land in the town of Lunenburg for the purpose of a local exchange. In pursuance of the general policy of the company with respect to permanent construction, a fair amount of underground work was done during the year in Halifax and Amherst, in all 28,872 of duct having been laid. The company has now 4,911 miles of wire in conduits underground. It having been

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will find everything supplied for comfort and convenience on trains of the

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THE CAFÉ CAR LINE

Passengers lunch or dine in full view of the magnificent scenery for which the D. & H. is famed.

Through Pullmans on night and day trains without change from Montreal to New York City.

Tickets via D. & H. will be honored on Lake Champlain steamers without extra charge.

Summer Schedules in effect June 30th, 1907.

Abel I. Culver, 2nd Vice-Pres. **J. W. Burdick,** Pass'r Traffic Man.

A. A. Heard, Gen. Passenger Agent. - - ALBANY, N.Y.

DOMINION LINE

Royal Mail Steamships

Weekly Sailings—

Montreal and Quebec to Liverpool in summer, Portland to Liverpool in winter.

Sailing Dates from Montreal and Quebec—

Ottawa, July 13, Aug. 17; Dominion, July 20, Aug. 24; Kensington, July 27, Aug. 31; Southwark, Aug. 3, Sept. 7; Canada, July 6, Aug. 10.

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Apply to local Agents or Company's offices—

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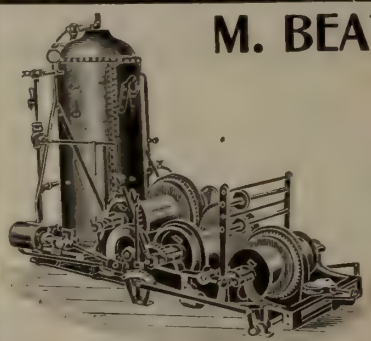

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Equalizing, Draw-bar, Buffer and Spiral Springs of all kinds

Street Railway Springs from the largest to the smallest

Manufactured by

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deemed in the interest of shareholders of this company, and of those of the Eastern Telephone Co., and the Valley Co., that the business of these companies should be merged, the directors of the N.S.T.Co., with the consent of the shareholders of all three companies, have effected an exchange of stock with the respective companies, and the telephone business of the territories previously served by the two last named companies is now being carried on by the N.S.T. Co. The business of the past year has been most satisfactory. The directors have every reason to believe that the outlook for the coming year is bright and encouraging, and they feel confident that a progressive policy under conservative management will be in the best interests of the shareholders, and of the public in general.

ASSETS

Exchanges and plant	$616,868.85	
Stores	36,114.94	
Stock in other companies, etc.	283,051.28	
Real estate, buildings, etc.	75,050.36	
Accounts receivable	41,737.65	
Due by agencies, including Halifax	15,956.84	
		$1,068,779.92

LIABILITIES

Capital stock	$778,990.00	
Accounts payable	45,281.55	
Bills payable	1,975.00	
Dividend payable Feb. 1, 1907	10,884.85	
Unearned rental reserve	22,650.00	
Brought forward	$859,781.40	
Accident reserve	10,000.00	
Insurance reserve	30,000.00	
Storm accident reserve	15,000.00	
Contingent and depreciation	143,061.77	
Profit and loss	10,936.75	
		$1,068,779.92

PROFIT AND LOSS ACCOUNT

Feb. 1, 1906, balance brought forward	$10,298.30	
Jan. 31, 1907, net earnings	48,462.17	
Jan. 31, 1907, premium on stock	7,610.02	
		$66,370.49
Jan. 31, dividends paid May 1, 1906 to Feb. 1, 1907	$38,433.74	
Insurance reserve	10,000.00	
Storm accident reserve	7,000.00	
		55,433.74
		$10,936.75

"PAGE FENCES WEAR BEST"

PAGE WIRE FENCES stretch tighter—posts can be set farther apart. That saves money—fewer posts, less labor digging post-holes, quicker erecting. **PAGE FENCES last longer**—made of No. 9 wire. **PAGE FENCES** are heavily **galvanized,** and for a small extra charge are supplied coated **WITH PERMANENT PAINT. PAGE FENCES** stand wear better, give longer service, keep your maintenance account down. The **PAGE KNOT LOCK** cannot slip and positively does not injure the wire. **PAGE FENCES do not sag.**

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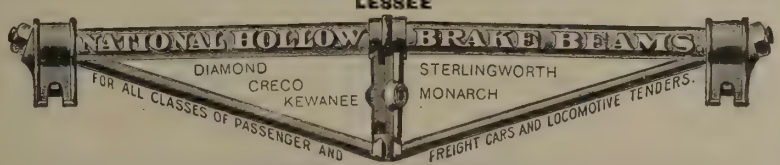

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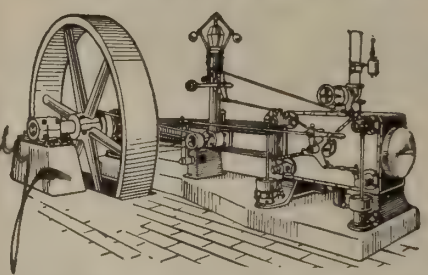

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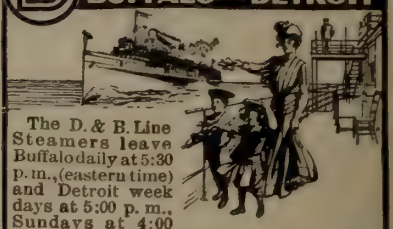

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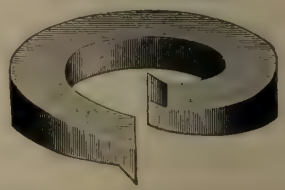

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Canada Foundry Co.....Toronto.
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Chicago Pneumatic Tool Co.....Chicago, Ill.
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E. L. Drewry.....Winnipeg.

Angle Bars
Hamilton Steel & Iron Co.....Hamilton, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

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Polson Iron Works, Ltd.....Toronto.

Axes
James Smart Mfg. Co.....Brockville, Ont.

Axe Steel
Montreal Steel Works.....Montreal.

Axles
James Hutton & Co.....Montreal.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.
Jas. W. Pyke & Co.....Montreal.
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Chicago Railway Equipment Co.....Chicago, Ill.

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Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst, N.S.

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Robb Engineering Co.....Amherst, N.S.

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Car Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Cars
Canada Car Co., Ltd.....Montreal, Que.
Crossen Car Mfg. Co.....Cobourg, Ont.
Dominion Car and Foundry Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
Rhodes, Curry & Co.....Amherst, N.S.
A. C. Torbert & Co.....Chicago, Ill.

Car Upholstery
N. J. Holden Co.....Montreal.

Car Windows
O. M Edwards.....Syracuse, N.Y.

Castings
Crossen Car Mfg. Co.....Cobourg, Ont.

Castings, Brass
Canadian Bronze Co.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.
St. Thomas Brass Co.....St. Thomas, Ont.

Castings, Iron
Canada Car Co., Ltd.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.

Castings, Iron and Steel
American Brake Shoe & F'dry Co ..Mahwah, N.J.

Castings, Malleable
Homer Taylor.....Montreal.

Castings, Steel
Canadian Iron and Foundry Co.....Montreal.
W. Kennedy & Sons (Ltd.)....Owen Sound, Ont.
Montreal Steel Works.....Montreal.
Rhodes Curry & Co.....Amherst, N.S.

Cast-Steel Hammers
American Brake Shoe & F'dry Co...Mahwah, N J.

Cast-Steel Track Tools
American Brake Shoe & F'dry Co...Mahwah N.J.

Cast-Steel Wrenches
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cattle Cars (Germicide)
Carbolite Carbolineum Co.....Toronto.

Cattle Guards
Climax Stock Guard Co.....Chicago, Ill.

Cement Machinery
Jas. W. Pyke & Co.....Montreal.

Chains
B J Coghlin & Co.....Montreal.

Charcoal Iron Staybolt Bars
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Chimneys
Steel Concrete Co. (Ltd.).....Montreal.

Coal Haulage Ropes
The B. Greening Co.....Hamilton Ont.

Coal Storage Plants
Steel Concrete Co. (Ltd.).....Montreal.

Cocks, Balanced Plug
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Concrete Mixers and Rock Crushers
Goold, Shapley & Muir Co.....Brantford, Ont.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Concrete Pipe
Steel Concrete Co. (Ltd.).....Montreal.

Contractors' Plant
M. Beatty & Sons.....Welland Ont.
J. T. Gardner.....Chicago, Ill.
F. H. Hopkins & Co.....Montreal.
The W. H. Kelson Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. C. Torbert & Co.....Chicago, Ill.
Toronto Pressed Steel Co.....Toronto.
Vulcan Iron Works Co.....Toledo, Ohio.

Contractors' Supplies
Cyclopean Iron Works Co.....Jersey City, N.J.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Conveyors, Coal and Ash
Babcock & Wilcox (Ltd.).....Montreal.

Cooking Apparatus
Geo. R. Prowse.....Montreal.

Copperware
Geo. R. Prowse.....Montreal.

Copying Presses
James Smart Mfg. Co.....Brockville, Ont.

Cordage
M. McKenzie Co., Limited.....Montreal.

Corrugated Furnaces
Continental Iron Works.....Brooklyn, N.Y.

Cotton Duck
M. McKenzie Co., Limited.....Montreal.

Counter Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Couplers, Car and Locomotive
Latrobe Steel & Coupler Co.....Philadelphia, Pa.
McConway & Torley Co.....Pittsburg, Pa.
National Malleable Castings Co..Cleveland, Ohio.
Washburn Steel Castings & Coupler Co.,
.....Minneapolis, Minn.

Couplers, Hose
Chicago Pneumatic Tool Co.....Chicago, Ill.

Cross Arms, Top Pins and Side Blocks
Canadian General Electric Co.....Toronto.

Cross Arm Braces
Canadian General Electric Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Crossing Gates
The N. L. Piper Railway Supply Co.....Toronto.

Crowbars
B. J. Coghlin & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Culverts
Steel Concrete Co. (Ltd.).....Montreal.

Culvert Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co, Hamilton.

Cuts
Acton Burrows Limited.....Toronto.

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Dominion Wire Rope Co.....Montreal.
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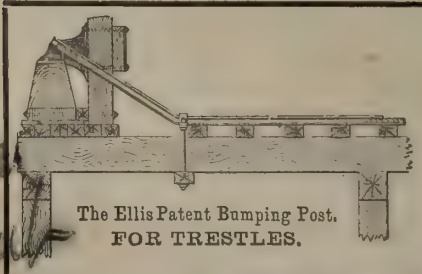

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Owen Sound Wire Fence Co..Owen Sound, Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

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Standard Steel Works.....Philadelphia, Pa.

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F. B. Stevens.....Detroit, Mich.

Foundry Supplies
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Standard Explosives Limited.....Montreal.

Fuse Detonators
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McCord & Co.....Chicago, Ill.

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Gartshore-Thompson Pipe & F'dry Co., Hamilton.

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Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
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Owen Sound Wire Fence Co..Owen Sound. Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

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Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

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W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

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Wolfe Brush Co.....Pittsburg, Pa.

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John S. Metcalfe Co.....Chicago, Ill.

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Hammers, Calking, Chipping and Riveting
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Independent Pneumatic Tool Co.....Chicago, Ill.

Handcars
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W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
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Rice Lewis & Son.....Toronto

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W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

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Crossen Car Mfg. Co.....Cobourg, Ont.

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Brown Hoisting Machinery Co....Cleveland, Ohio

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Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill

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Falls Hallow Staybolt Co..Cuyahoga Falls, Ohio.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

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G. S. Wood.....Chicago, Ill.

Hose, Suction
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

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Interlocking Signals
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Iron, Bar
Homer Taylor.....Montreal.

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Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
Nova Scotia Steel & Coal Co..New Glasgow, N.S.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
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Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville, Ont.
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McCord & Co.....Chicago, Ill.

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Wolfe Brush Co.....Pittsburg, Pa.

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E. L. Drewry.....Winnipeg.

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Canadian Westinghouse Co.....Hamilton, Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

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Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
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American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal.
Homer Taylor.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
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Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
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Locomotives (Steam)
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Canadian Locomotive Co.....Kingston, Ont.
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The W. H Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.
Flannery Bolt Co.....Pittsburg, Pa.

Lubricators
McCord & Co.....Chicago, Ill.
Homer Taylor.....Montreal.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery, Power
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Machinery Special
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Manganese Steel Castings
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Manhole Frames and Covers
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Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.
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Motors
McCord & Co.....Chicago, Ill.

Moto s (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
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Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal

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Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tanks
S. F. Bowser & Co. Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto.

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N J. Holden Co.....Montreal.
Independent Pneumatic Tool Co....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

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Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
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Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

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W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

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S. F. Bowser & Co., Limited.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
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J. J. Gartshore.....Toronto.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

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The Rail Joint Co. of Canada.....Montreal.
N. J. Holden Co.....Montreal.

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Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Mach nes
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago. Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

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Standard Steel Works.....Philadelphia, Pa.

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Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkeville, Ont.
Dominion Bridge Co.....Montreal.

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O. M. Edwards.....Syracuse, N.Y.

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O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.

Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

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Gartshore-Thompson Pipe & F'dry Co., Hamilton.

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O. M. Edwards.....Syracuse, N.Y.

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Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

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Babcock & Wilcox (Ltd.).....Montreal

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The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

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N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes, Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

Spikes, Railway, Ship or Pressed
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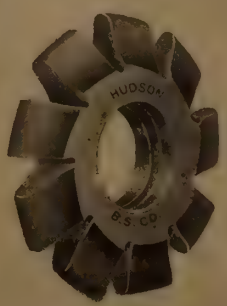

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STEEL RAIL FAILURES.

At a recent meeting of the Canadian Society of Civil Engineers in Montreal there was a topical discussion on steel rail failures, which, in view of the great importance of the subject at present, we think it well to give very fully.

J. G. G. KERRY, who presided, said that a number of persons with great experience in the use and manufacture of steel had in the past few years taken up the problem of the betterment of steel rails, but the results had not been very definite. Following is a report of the main features of the discussion:

F. P. GUTELIUS, Assistant Chief Engineer C.P.R.: The rail failures on the C.P.R. during the last few years, more particularly during 1901-1902, seem to have been due to flattened ends and pipes in the rails. The investigations showed that flattened ends occurred either in rails that were soft or contained a pipe. As a result the rail widened out at the head to as much as ½ in. in excess of the width of the original rail. It became necessary to renew rails that otherwise appeared to be sound, on account of this flattening and the subsequent reduction in the height of the rail. The next important cause of rail failures was due to the pipes, open cavities, or seams in the rails produced in the original ingot during the process of rolling. These pipes are caused by the rolling out of a gas bubble, and sometimes they extend through the entire length of the rail. The bubble may have been globular in the original ingot, which was 6 or 8 ft. in height. When the ingot is rolled into rails it is increased in length to 180 or 200 ft., and in some cases where small rails are being rolled from the larger ingots this increase is doubled. The failure of a pipe rail is caused by the detachment of a piece of rail on one side or other of the head. These piped rails, however, if carefully inspected, could be detected and removed before anything more than a receding had taken place. To the trained eye a pipe becomes apparent as a black streak on the surface of a rail which otherwise would be bright. The more recent rail failures consist of a breakage in the base of the rail. A typical break during the past two years has been a break parallel to the axis of the rail, causing a piece from 8 to 24 ins. long to jump out of the side of the flange. When the fracture is examined along the base of the rail there is a smooth surface or corner, which appears to have been caused by a fold in the rolling of the rail. This fold in many cases is simply skin thick, that is, only of sufficient depth to give a smooth surface like the edge of a knife at the point fractured. The piece breaking out from this line of weakness started possibly by this little fold, to which reference has been made, and will work its way through following the line of least resistance. A very small amount of traffic will then cause it to break. Now this character of break covers rails which the C.P.R. have been using during the past two years, that are rolled in conformance with their recent specifications, which require in Bessemer steel a carbon content of from .53 to .63%, with an average for the lot of rails between .57 and .59% of carbon. The amount of carbon was increased from .45 to .50%, which is considered the commercial specification to this higher rate on account of the original experience with soft rails. This increase in the carbon has, so far as can be judged, stopped the original difficulty with flattened ends. Whether this additional carbon and the rearrangement of the other chemical contents, viz., the reduction of phosphorus to .085% in Bessemer and .06% in open hearth, and the sulphur manganese, being in accordance with the standard specifications, have any influence upon the structure of the steel, it is difficult to say. It would seem that the difficulties in connection with rail breaks are not caused by their chemical content, but are rather due to the mechanical defects. Lack of homogeneity in the mass of the steel seems to be the cause. Ninety per cent., speaking generally, of the breakages not traced to track or rolling stock causes, have been on account of what appear on examination to be mechanical defects similar to the defects that were spoken of in connection with the typical breaks.

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H. R. CHARLTON,
Advertising Agent, Grand Trunk Railway.

Speaking of the chemical contents of rails generally, some years ago when soft rails seemed to be inevitable, and the outlook for better steel was discouraging, the C.P.R. had some hundred chemical analyses made of rails that were known to be good, of those that had proved bad, and of ordinary rails. These analyses were made by reputable chemists, one Canadian and two United States, from drillings taken by the C.P.R. expert. The results obtained were tabulated. The best lot of rails gave the poorest chemical results, whereas the best chemical composition belonged to the rails that had been considered the worst. This indicated that good chemical composition is not the only requirement for good rails. It would appear from ordinary experience that the difficulties to be overcome are mechanical ones. Whether they are caused by too much carbon, too infrequent rolling, or by poor mixture or millp ractice, is not known. It has been intimated that there is a tremendous epidemic of rail breaks. The breaks on the C.P.R. tracks, which cover from 8,000 to 10,000 miles, have in the last 12 months not exceeded those of the previous year. A great many of the rails being used by the C.P.R. are made in Canada, and one brand in particular is giving very good results. These rails have been given 19 or 20 passes during the process of rolling them, and the extra amount of work thus done on the steel seems to be beneficial to the final product. This is supported by the fact that the poorest rails are those made in large United States mills, which have been produced after 10 or 11 passes. If the rails could be produced entirely homogeneous, rail breaks would be minimized.

J. G. G. KERRY: To sum up, it would appear that the change in chemical contents has had a beneficial influence upon the hardness of the rail in the matter of flattening. At the same time, if the C.P.R. had changed the chemical content and had the rails manufactured by the same mills, it is not certain that the results would have been so satisfactory, that is, the individuality of the mill must be added to the chemical content. The improvement is the result of the two, the manufacture and the specification.

F. P. GUTELIUS: One or the other, or both, might be the reason. From a large number of analyses that have been made of broken rails, sufficient information has never been obtained to enable one to say that any

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rail was broken because the carbon was too high or the phosphorus too high, or the sulphur too high, but the results were generally what would indicate fair chemical composition. One speaks of segregation, which is understood as being a collection of one or more of the chemical constituents, as a possible cause, but one does not usually find it.

J. G. G. KERRY: Have you had any success in your experience in reducing the number of failures from pipes, and what special steps have you taken to meet that difficulty?

F. P. GUTELIUS: Our specification calls for the end of the bloom to be cut off at a point where the last of the broom-like structure is noticed, and then to cut off another foot into seemingly solid steel. The number of failures from pipes during the past two years has been very low.

J. G. G. KERRY: You would attribute that to the specification requiring the additional foot to be cut off?

F. P. GUTELIUS: Yes, that means that the only bubbles remaining are those that are well down in the ingot, and these would be exceedingly small on account of the pressure.

J. G. G. KERRY: Does there seem to be any relation between temperature and failures?

F. P. GUTELIUS: There does. Ninety per cent. of the rail failures occur in the months of Jan., Feb., and Mar., i.e., during the winter season.

J. G. G. KERRY: Are these failures due to the rigid support under the rails, or to the peculiar characteristics of the steel at low temperatures?

F. P. GUTELIUS: So far as can be ascertained, the rail is not perceptibly more brittle when it is cold than when it is warm. It would be interesting to have a series of tests made to show the difference in the brittleness of the rail or steel of any kind at various temperatures, particularly temperatures below 20° below zero. Then, too, experiments should be made with the rail itself where the temperature during a period of 24 hours, we will say, varied 60°.

J. G. G. KERRY: Does the frequency of failures coincide with the incoming of low temperatures or great change of temperature?

F. P. GUTELIUS: That can scarcely be positively affirmed. In the case of a recent epidemic of breaks that have occurred in two or three days' time in a locality not covering more than 20 miles, there was considerable variation in the temperature during the preceding three or four days, but nothing greater than these same rails had probably undergone in previous winters.

J. G. G. KERRY: While the question of rail breaks is a very serious one, is it anything like as serious as it is generally considered, or as would appear from press discussions?

F. P. GUTELIUS: No, it happens that this evening we read about a very serious accident. That is the only accident of any consequence that has occurred on the C.P.R. on account of broken rails.

J. G. G. KERRY: As a matter of fact, though a rail does break occasionally, the percentage is exceedingly small, is it not?

F. P. GUTELIUS: The C.P.R. give a section foreman two rails to the mile for his winter supply, and that is expected to cover all of the breaks or failures from any cause which would occur in that mile during the year. Of course there are many rail racks that never need to be refilled. There are others where rail racks require new rails once a year, and occasionally an epidemic of breaks occurs in which half-a-dozen rails go into the same mile, but three or four such epidemics would cover any experience on the C.P.R. in the last four or five years.

J. G. G. KERRY: Are these accidents not attributable to some difficulty of the road or with the rolling stock?

F. P. GUTELIUS: Yes, they frequently are. It is often difficult to attribute them to the rail directly. It is possible that the punishment which the rail receives on account of the rigid track, heavy traffic, and variation of temperature, will prove too much for a weak rail to withstand. The weak rails in a lot are probably those that have had pipes or little folds in them. These rails might hold if the temperature were not too severe, if the frost had not penetrated too deeply into the ground, or if the tracks were not so rigid. Under lighter traffic they might hold.

J. G. G. KERRY: Does the C.P.R. contemplate any change in its specification or testing?

F. P. GUTELIUS: No, the C.P.R. believes that it has the best rail laid on the American Continent. The breaks on this road are very much less numerous than those of other railways, and, generally speaking, the outlook for rails is not nearly as alarming as it was five years ago.

J. G. G. KERRY: In case of accident, is it a difficult matter to prove whether the break in the rail occurred before or after the accident? Do the broken surfaces offer clear indications?

F. P. GUTELIUS: After the location has been examined by the track department, the locomotive department, and the car department, it is very seldom that the cause of the accident is not ascertained. The first newspaper telegraphic reports are usually wrong. They are usually written by somebody who does not know, and who, in order to make a good story, must attribute it to some cause or another The broken rail or spread track is the simplest explanation for the average newspaper writer to offer

T. C. BURPEE, Engineer Maintenance of Way and Works I.C.R.: Judging from personal observations and experience during the past winter and during previous winters, generally speaking, there have not been more broken rails than previously, except on two roadmasters' divisions, which included the road between St. John and Truro. On these two divisions a great many more rails have been broken than is usual. As the rails were of a great many different brands, some from the U.S., from Sydney, from Germany, and some from Sault Ste. Marie, there does not seem to be a greater percentage of rails broken of one kind than of another. The German rails that are in the tracks are considered much softer than the other rails. That has been demonstrated by the flattening of the rails at the joints and otherwise; but the number of rails of harder quality that have been broken is equally great. During the winter a number have broken on one side of the track, the majority of the breaks, that is, in that district between St. John and Truro, occurred on the south side of the track. It would lead one to think that it was a broken wheel that punished the rail at some period. Of course that is something that has not been found out, but on the other parts of the road it is not apparent that there have been more broken rails this winter than previously. On the road between Montreal and Moncton, and between St. John and Moncton, there are a lot of 67-lb. rails lying alongside of 80-lb. rails. Nothing seems to point to the fact that the 67-lb. rails break any more readily than the 80-lb. rails. One would think that the rolling stock, the engine, which is used to-day, and which is double the weight of what was used a few years ago, would require heavier rails even than the 80-lb. rails, which are the present standard. A few years ago the 56-lb. rail was considered a good rail for the rolling stock at that time. The heavier rolling stock is, to a certain extent, being used on the 56-lb. rails to-day, and it is a question whether the skin of the rail has not something to do with the breakage.

J. G. G. KERRY: What was the weight of the rail on the track you mentioned?

T. C. BURPEE: The greater part of it consisted of 80-lb. rails. It was comparatively new rail that had not been in service more than a couple of years. Some had been in service since 1899. Of course, it is well known the 80-lb. rail remains better than the 56 or 67-lb. rails. It creeps less and separates less, or spreads less, and the 100-lb. and 110-lb. rails are still better in that respect.

J. G. G. KERRY: How much 110-lb. rail is there on your lines?

T. C. BURPEE: About 35 miles of it. However, the rails have not proved as satisfactory as one should like them to have done. There was probably something wrong in the manufacture. The rail surface was very bad, and as a result the tops of the rails flattened and smashed.

J. G. G. KERRY: The interior would be fairly soft?

T. C. BURPEE: Yes, and brittle. One cannot explain why some of the rails break on some sections any more than on others, unless it is that they are frozen in, that there is more ice, and that the track is more rigid.

J. G. G. KERRY: Is there anything typical in the break?

T. C. BURPEE: No, nothing. Some of them are square, clean breaks, others break through the bolt holes. What is required is an investigation of the rails without defects, which break, and to find out why it is that they break, but the probability is that breaks and broken rails, as well as railway accidents, will exist while there are railways. The I.C.R. only had two railway accidents caused by or due to broken rails, and these were with freight trains. No passenger train accidents occurred at all, and, as elsewhere, these accidents all took place in the midwinter months.

J. G. G. KERRY: So that in reality rail breaks all occur in winter?

T. C. BURPEE: Yes, the greatest proportion of breakages occur in March, during the time when the track is frozen into the ice, very rigidly. That is the time one looks more particularly for broken rails, more so than in the colder months.

J. G. G. KERRY: Is there trouble when a good deal of ice holds down the rails firmly, underneath the rails?

T. C. BURPEE: Yes, there is then no chance for the track to give.

J. G. G. KERRY: Are you fairly well satisfied with your present specification?

T. C. BURPEE: Yes. The rails which the I.C.R. have received from the Sydney mills have been rolled on what is called the sanitary specification. The silica is taken out of the middle of the rail and then added afterwards, and the head of the rail is sprinkled with a water jet during the process of rolling. It is hoped that the benefit of that specification will be realized. Mr. Sandberg says that a great number of roads in England are adopting that specification. The purpose of that treatment is to give a harder rail and to retain the toughness of the steel. The combination of the ingredients causes this toughness, and will make the rail much harder.

J. G. G. KERRY: Up to the present has the rail been long enough in the track, that is, a sufficient length of time to be able to form any marked opinions as to its wearing qualities?

T. C. BURPEE: Some of them have been in about a year or over a year.

J. G. G. KERRY: Do they show about the same percentage of breaks?

T. C. BURPEE: Yes, but the wear is not so great. The joints are standing up better than the other rails did, and this in spite of the fact that the first year is the hardest on rails as far as flattening goes.

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J. G. G. KERRY: Will soft rails show inside of a year?

T. C. BURPEE: Yes, and the rolling of the wheels will harden the surface of the rail.

J. G. G. KERRY: Would you consider that the average rail at present is an overloaded rail, having in view both the increase of the rolling stock and the increase in the speed of traffic?

T. C. BURPEE: It might be. However, until the present the rails were so soft that the ends of the heavier sections were soft enough to mash. This so diminished the life of the rails that it almost prohibited the use of heavier sections by the companies. If specifications for heavier sections will give as good results as the 56-lb. rails, there is no reason why the former should not be introduced. As the 67-lb. rails have not broken to any greater extent than the 80-lb. ones, it would go to show that the section is really strong enough to stand the load. The advantage of the 80-lb. rails is that they are not so apt to spread under the movement of traffic.

H. HOLGATE: Mr. Gutelius considers the manipulation of the rail to be more important than the constituents. This seems probable, for, although the British committee on standards has adopted a rail specification in which the carbon is 30% less than in our specifications, they are not free from broken rails. The carbon content is .35% to .50%. According to recent figures English railways have had a lot of trouble with rail breakages, and all could not be attributed to the chemical constituents of the rail.

J. G. G. KERRY: That would be a specification for a lighter grade of rolling stock.

H. HOLGATE: There are very heavy loads on some of the railways. Rolling stock conditions are, of course, different from those in America, but the condition of rails breaking generally has been a serious one in the last year or two, according to American engineers. Reports of the Maintenance of Way Association show that a large number of breakages occurred.

J. G. G. KERRY: There has been a great deal of attention given to rail breakages by the various technical societies in the last year or two. Yet it is questionable whether the whole number of breakages is greater than it has been for some years past. However, no figures seem to have been published that would either prove or disprove this statement.

H. HOLGATE: I do not know whether the figures published by the Maintenance of Way Association show that or not. The breaks have been serious, and the general conclusion reached was that it is a mechanical defect in the rail and not a chemical one that is responsible for most of the trouble. At the last meeting held on this subject by the Canadian Society of Civil Engineers, some one remarked about the heavy demand made on the rolling mills lately, but those in direct touch with railway matters would have figures to compare year by year the increase in consumption of rails during the last few years. Although such figures are usually confidential, it would not do any harm to get figures on the question. Whether the Maintenance of Way Association made any effort to get comparative time breakages or not, whether they went into the question of date or time at all, has escaped my memory. There is a memorandum in the last report which gives the number of rail breakages on three railways, but the names of the railways are not given. In one year 537 rails broke; out of these rails 1 was in service for 17 years, 4 for 9 years, 43 for 8 years, 22 for 7 years, 3 for 3 years, 22 for 2 years, and 439 for 1 year, showing that weak spots were found in the first year of service. However, that would not necessarily apply to every batch of rails. Only one of these rails was rolled in 1888, one in '95, 31 in '96, 17 in '97, 24 in '98, four in '02, 21 in '03, and 438 in '04. Of these 224 had flaws. They were 85, 80, and 75-lb. rails. There were 304 flaws in 537 rails.

F. P. GUTELIUS: How many miles of track does that represent?

H. HOLGATE: That is not given.

F. P. GUTELIUS: It might have been miles of rail.

H. HOLGATE: It does not mention the mileage.

F. P. GUTELIUS: There is just one point in connection with the size of rails and their liability to break under a given traffic. The additional stiffness in heavy rails is liable to be so great that they will break rather than conform to the irregular surface caused by the heaving of the frost, whereas rails of lighter section will bend to suit this uneven surface. It is probable that for Canadian gravel ballast track rails of 80 or 85 lbs. per yard are less liable to break than rails of heavier section.

J. G. G. KERRY: In your experience does the 100-lb. rail show any marked superiority in the matter of breakages over other lighter rails similar in quality?

F. P. GUTELIUS: The C.P.R. has about 50 miles of 100-lb. rails. In the same month of the same year there were as many broken 100-lb. rails as of the 80-lb. ones. The 100-lb. rails are probably better taken care of since they lie in a district where there is better surface than in that where the 80-lb. rails are laid. In one portion of the line, from Montreal Jct. to Windsor St. Station, only passenger traffic is handled. There are 100-lb. rails on both tracks, and the proportion of failures does not vary in proportion to the traffic on this line as compared with the line between Vaudreuil and Western Jct., over which there is a heavy freight traffic. There are more square breaks in apparently solid steel in the 100-lb. rails than in any of the lighter rails, taking the average per year, per mile.

J. G. G. KERRY: It would seem to be a fair conclusion to this section of the discussion to say that the majority of rail failures are caused by mechanical defects, such as folds or pipes; and that they cannot be said to be due to the fact that the rails used are too light for the traffic put upon them.

F. P. GUTELIUS: In connection with the low carbon rails spoken of by Mr. Holgate, the probability is that the carbon was compensated for by a greater amount of silicon. In the Sandberg specification, referred to by Mr. Burpee, the carbon is kept lower and the silicon is introduced to secure hardness and toughness. The claim is that a better rail is secured on that account. Sandberg introduces not less than 2% of silicon. In rails rolled for the C.P.R., under his specification, the silicon did not exceed 2%, and the carbon was kept fairly high.

J. G. G. KERRY: Information is necessary, it would seem, first of all on the actual effect of temperature on the characteristics of steel; secondly, on the question of improving the treatment of the steel in the mills so as not to develop flaws, and thirdly, on the use of better ballast to prevent the freezing in the rail and the subsequent breakages.

F. P. GUTELIUS: The punishment that a rail receives in the track as compared with the drop test of 2,000 lbs., tup fall 20 ft., is a mere bagatelle. That drop test bends a 5 to 8 ft. rail so that its middle ordinate for 4 ft. is from 2 to 3¼ ins. If all the rails were equal to stand that test there is no traffic or track condition that would compare with it.

DR. A. STANSFIELD: There are some points to be mentioned in regard to the chemical composition of rails. During recent years the effect of the increase in weight of rolling stock has been to oblige the steel makers to increase the carbon in the steel in order to obtain a harder and stiffer rail, and the result of this increase in carbon has been to make it more difficult to get a rail which shall not be brittle. Admitting that the specifications as generally put forward are approximately correct, in some cases rails are not absolutely rejected even when they have more than the ordinary maximum limit for carbon and for phosphorus, and in this connection it should be recognized that the combined effect of somewhat large quantities of both of these constituents is likely to be more dangerous than a somewhat high percentage of one alone. For instance, if the maximum carbon allowed is .65% and the limit of the phosphorus is .07%, then, if the carbon and phosphorus are both high, there will be more danger of brittleness than if one of these elements were high and the other low. The effect of phosphorus on steel is a very difficult one to determine, and very conflicting results have been obtained. Phosphorus is found to be more objectionable in high carbon steel than in low carbon steel, and in the steel used in modern rails phosphorus is a very dangerous constituent. Another reason why the effect of phosphorus on the rail is uncertain, is that phosphorus not only has a direct effect in causing brittleness, but it appears to render the rails more easily spoilt by overheating or other unsuitable heat treatment in the operation of rolling.

BARON G. DE CORIOLIS: With regard to the percentage of carbon and phosphorus given by Dr. Stansfield, the phosphorus can be brought down to .04% and the carbon can then safely be raised to .75%. That is the composition of the cheapest rail that can nowadays be made in England.

DR. STANSFIELD: The carbon can, of course, be brought as low as .04%, and it can be kept without difficulty as low as .07% in the basic open hearth furnace. Another point in connection with the percentage of carbon and phosphorus is that on account of segregation the analysis does not always show the maximum amount of these elements in the rail. It is well known that when the steel is being poured into the moulds, it begins to solidify from the bottom and the sides of the ingot, and the last fluid portion of the steel, which is near the top of the ingot and in the middle of its cross section, will contain a somewhat larger amount of carbon and phosphorus than the ingot as a whole. A. A. Stevenson and R. Kent have investigated the distribution of carbon in the steel ingot and found it to vary in one case from .53% to .70%. This possible variation should not be forgotten, and it should be the object of the specifications and methods of inspection of the rails to prevent any considerable part of any rail containing larger proportions of carbon, phosphorus, and manganese than has been found to be perfectly safe, having regard to the usual method of manufacture.

J. G. G. KERRY: Does the segregation all lie in one rail?

DR. STANSFIELD: The most impure portion of the ingot would probably all go into one rail, the rail from the top portion of the ingot. There might also be considerable variation in parts of the same rail. The middle of the rail, or that part of the rail which comes from the middle of the cross section of the original ingot, would probably be more impure than the outer portions of the rail.

J. G. G. KERRY: Would not the part last to solidify be a comparatively large part of the ingot, something like 25%, and sufficient in itself to make several rails?

DR. STANSFIELD: The part which contains the largest amount of impurities is somewhat irregularly disposed in the ingot, and it would be difficult to give any reliable figures with regard to its amount. With regard to the matter of piping in ingots, the members may have read a recent and very instructive paper by Prof. Howe, of New York, in which

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he deals very generally with the piping of ingots. He shows what happens in casting ingots, and gives an enormous amount of information showing why pipes are actually formed. He suggests certain methods for reducing the amount of piping in ingots. One of the suggestions is that the ingots should be poured in moulds of which the top is larger than the bottom, instead of the reverse, as is generally the case. The effect of casting in moulds that are larger above than below, would be to cause the bottom of the ingot to solidify more rapidly, while the top would remain molten longer than usual, and in this way the formation of a pipe in the ingot would be very largely prevented. Professor Howe suggests methods of stripping ingots of this type.

One other point in connection with the chemical composition is to be noted. It has recently been found that nitrogen is an important constituent of steel. This fact was discovered some years ago in connection with some pig iron produced in Sweden. It was found that the wrought iron produced from it was brittle at an orange heat. A Swedish chemist, H. Braune, investigated this case very thoroughly, and found that the unsatisfactory pig iron was made in the blast furnace when the slag was basic and the temperature unusually high. Under these conditions he was led to believe that nitrogen probably entered into the pig iron being derived from the cyanides present in the furnace. Nitrogen is of the same chemical group as phosphorus, and it might therefore be expected to have a similar bad effect on steel. In 1903, Braune began to investigate the matter experimentally, and found that iron absorbs nitrogen not only in the blast furnace, but in other processes in which the metal is exposed to nitrogen and carbon at a high temperature, and in the presence of basic slags, and that the nitrogen had a profound effect on the mechanical properties of the iron. These researches were carried out in the University Laboratory at Basel, in the Testing Bureau at Zurich, and at the College Des Mines in Paris. Like phosphorus, nitrogen makes iron and steel brittle, and this effect is more pronounced in high carbon steel than in wrought iron or low carbon steel. Braune examined commercial iron and steel from all over the world, and found that it contained from .002% to .062% of nitrogen, and specifies the following as the maximum allowable percentage of nitrogen:

For beams and ship plates of wrought iron or soft steel	.030%
For rails of medium hard steel	.025%
For railway springs and hard steel tools	.012%
For cannon and parts of rifles	.008%

Braune says that the nitrogen in steel can, with care, be kept down to these figures by the present methods of manufacture. According to this, nitrogen is an important factor in the steel, and it may be that when this is looked into we shall find some of the breakages and the brittleness which previously puzzled chemists to be due to nitrogen. This specification is very recent. The investigation began in 1900 or 1901, and most of the work has been done since 1903. It was found that after the nitrogen had reached .04%, brittleness was produced, and that the nitrogen could then be detected microscopically, producing a ring-like structure in the steel. With regard to heat treatment in rolling, one special point has been referred to, that of the spraying of steel rails during rolling. This was worked out about three years ago by J. B. Stead, of Middlesbrough, who found that if a piece of steel rail were quenched from a red heat, and then tempered by heating to 400 or 500° C., it became very much harder without any accompanying brittleness, and when tested on a grindstone the hardened rail lost less than one-third as much steel by rubbing for a given time as a similar rail which had not been treated in this way. Microscopically examined, the hardened steel is said to be sorbitic in structure, while the slowly cooled rail consists largely of pearlite. This means that the carbon in the slowly cooled rail has had time to separate out in minute bands of carbide of iron, while in the quickly cooled rail, this separation has not taken place, the constituents of the steel are more intimately mixed, and the rail is consequently harder. Quenching a rail, unless this were followed by suitable reheating, would, of course, produce brittleness. In practice, the sorbitic structure is produced in rails by spraying the head of the rail during the process of rolling, and while this treatment undoubtedly improved the low carbon steels (.29% to .48%) on which Stead worked it may not always be so desirable in the case of the modern high carbon rails with their greater tendency to brittleness. Modern steel rails contain about .60% of carbon, which is a higher percentage than was contained in those on which Stead was working. Another point is that the spraying of the head should be done carefully to avoid undue cooling of the thinner portions of the rail. If the web or the flange of the rail were cooled too quickly by water getting on them, there would be danger that they might be made brittle.

With regard to the effect of low temperatures on the brittleness of steel rails, the only information I have been able to obtain has reference not to the direct effect of low temperatures on the brittleness of steel, but to the effect of low temperatures in preventing the recovery of steel from overstrain. Dr. E. G. Coker worked on this at McGill about 1900-1901, and E. J. McCaustland, of Ithaca, N.Y., published a paper last year. It was found that steel, which had been subjected to tensile or other stresses until the elastic limit had been passed, recovered from the overstrain after an interval of rest, and that the recovery is far more rapid at high than at low temperatures. Mild steel was found to recover perfectly in about a fortnight at the ordinary temperature, while there was practically no recovery in three months at the freezing temperature. This appears to be one way in which the winter conditions in Canada may have a bad effect upon rails. It may be, for instance, that at ordinary temperatures, if the rail is overstrained by the passage of the train, it will have had time to recover itself, in part at least, and have become elastic again before the passage of the next train, but in winter this recovery scarcely takes place at all, and therefore the repeated passage of the train may have a worse effect than it would in the summer.

With regard to the use of the microscope in testing steel rails, while the chemical analysis is most important for determining the composition of the rails, and the mechanical tests show whether the rail is good or bad, the microscope will give evidence as to the heat treatment to which the rail has been subjected, and in the case of a bad rail which has a good chemical composition, the microscope may be able to throw light upon the cause of the bad character of the rail. The indications of the microscope, however, require considerable experience and skill before they can be reliably interpreted. Two specific points in the history of a rail which can be made out by the aid of a microscope are these: Whether the rail has been cooled quickly or slowly, and whether the rolling has been finished at a high or low temperature.

J. G. G. KERRY: There is one point about which I should like to enquire, and that is in regard to the skinning on the rail during its early passage through the rolls which folds over and makes a flaw in the rail during the final passage. Is there any treatment to meet this difficulty?

DR. STANSFIELD: That is a matter for the engineer who designs the rolls. The difficulty could probably be met by a proper adjustment of the rolls.

F. P. GUTELIUS: Dr. Stansfield's remarks suggest one or two comments in regard to micro-photographs and the spraying of rails. The fact is, that to get the rails cool in the ordinary modern mill they do spray the rolls with water more than the Sandberg process would put on the head of the rail. If the Sandberg process does any good, it is simply to increase the quantity of water that is carried on the web of the rail, and the probability is that the quantity of water that gets on the head, added to the quantity of water naturally put on the rail while it is rolling, gives a double dose to the thinner portions of the rail, and possibly introduces an element of hardness or brittleness in thinner portions of the rail that is injurious. We had 5,000 tons of Sandberg rails rolled, and have half of them in the track. We are not spraying any more. Some years ago the C.P.R. were of the opinion that by adding the micro-photograph to their specifications they would get more homogeneous rails. This was done, and although the rail obtained was fairly good, the variation in the granular structure was so great in the same rail that the confidence placed in the micro-photograph, as a source of valuable information, was lessened, and it is no longer one of the requirements of the specification.

T. C. BURPEE: In justice to Mr. Sandberg, it is only right to say that during the process of rolling the water jet was not played on the thinner portion of the rail but on its head. The jet was turned on the head of the rail only, and the water did not drop upon the web. The experience on the I.C.R. is that the rails made according to his specification are doing as well as any in the track. Engineers here have the choice between acid Bessemer rails, made at Sault Ste. Marie, and Bessemer open hearth rails, made at Sydney.

BARON DE CORIOLIS: Mr. Gutelius has pointed out that rail failures are chiefly due to mechanical defects in the rails, which may be due to the defective chemical composition. He has no doubt given the real cause. Canadian manufacturers are laboring under great difficulties. It is a well-known fact that both in Great Britain and in the U.S. the manufacture of Bessemer steel is giving way before the open hearth process. The U.S. Steel Corporation is now building extensive steel factories for the open hearth process and is not making extensions for the Bessemer process. This is because the ores for the Bessemer process are becoming scarcer every year and, consequently, make the cost of production of that steel much higher. Now the manufacturer is limited by the price he gets from the railway companies for his rails. Since it now costs more than it formerly did to manufacture the steel in a Bessemer plant, it follows that to make a profit out of the bargain he has struck, he cannot be expected to make rails without defects. There is no doubt about this, and it has been pointed out by the best steel makers in England. The manufacturer who is making open hearth steel in Canada also labors under difficulties. He has to deal with highly silicious ores. It is a well-known fact that the more silicon there is to eliminate, the slower, and consequently the more expensive, is the making of steel in the open hearth furnace.

The main reason of your rail failures must, therefore, be ascribed to the difficulties Canadian manufacturers experience in making rails out of poor ores with their process of manufacture. If in Canada the system existed which is being introduced in some parts of Great Britain, and even in the U.S.—if Canadian manufacturers were adopting the improved method of the open hearth process then one would find that all difficul-

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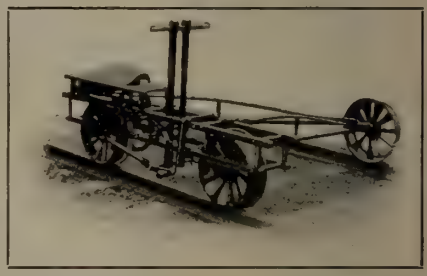

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ties would disappear. Manufacturers would then be able to turn out here steel rails at a much cheaper price than they can do now. For instance, it is possible to install in Montreal a mill that would turn out a first-class rail with carbon .75% and phosphorus so low as .04% for $26.00 per short ton, the flange rail according to the specifications which are adopted by the railway companies here. This is the result of the enquiry made in England, and that is the figure arrived at. As this meeting is composed of men of vast experience, it would be advisable for them to enquire into the facts just put forward. They will see that the safety of railway companies here is in the adoption of a rail made after the new process, with carbon as high as that mentioned, and phosphorus as low as that mentioned. When Canadian engineers have tested that rail, they will come to the conclusion that it is the best that can be adopted in this country. The C.P.R. engineer has pointed out that formerly they used the American standard specification, which allows carbon percentage of from about .45 to .50%, and a phosphorus percentage of .10%, and that he has found that in altering these figures and in increasing the carbon from .53 to .63%, and reducing the phosphorus to .085% for Bessemer and 0.06% for open hearth, he has obtained better results. That is conclusive evidence that the American standard specification no longer serves the purpose, and that the higher the carbon is the lower the phosphorus is, in the open hearth process, the better is the rail.

J. A. JAMIESON: One point seems to have been left out in to-night's discussion, one that is possibly of great importance, namely, the question of internal stresses in the rail section due to overheating. A short time ago a beam about 20 ft. long and 10 ins. thick was dropped accidentally. It split right through the centre of the web for at least 75% of its length, and opened out at the end, indicating very serious stresses due to uneven cooling or some similar cause. There were no flaws along the line of fracture. It would be interesting to know whether this was really due to uneven cooling, and such information might possibly lead to interesting results with regard to steel rail failures.

The following contributions to the discussion were sent in writing:

F. P. SHEARWOOD, Dominion Bridge Co.: In the discussions and investigations which are now being made into the reasons which cause the great number of breakages of the heavy modern rails, interest is so engrossed in the composition and treatment of the metal that other possible defects have received comparatively little consideration, and a few criticisms of the shape of the heavier section of rails may lead to useful investigation. In the discussions on this subject it has been often stated that the new 80-lb. rails do not show as long a life or as reliable a strength as the rails rolled 10 to 20 years ago, even in the case where the two sections have been subjected to the same traffic. In view of these statements it seems probable that the increase of metal has not been utilized to the best advantage. The modern 80 or 100-lb. rail has over twice the vertical section modulus of a 60-lb. rail, which means that it should be able to span more than twice the distance without injury, or that over a similar span the fibre strains would be less than one-half. This great difference in the vertical bending value should more than compensate for even great flaws or other defects in the metal, and it would seem to point out that the stresses from direct vertical bending do not produce the most destructive strains which a rail should be able to withstand. Rails which are located on the curved portion of the track are said to have more breakages than those on the tangents. This indicates that horizontal forces are doing the injury, for the vertical loads are inappreciably greater than on the straight line. The winter and spring months are said to be the worst time for broken rails, especially during frosts which have followed a warm spell, and when ice is formed on the track. It is probable that during these times a film of ice is formed between the rail and the tie, thereby reducing very considerably the friction between them, and if at some of the ties the spikes are not fitting closely to the rails, the horizontal forces will produce increased horizontal bending and torsional strains (the latter due to the flange being so much stiffer than the head in a horizontal plane). The web is the weak part of a tee rail when called upon to resist horizontal loads which are applied at the upper side of head and supported at the bottom of the flange. When comparing a heavy modern section with an old light one, it is first seen that the increased depth produces greatly increased stresses, and then that the thickness of webs has not been increased to anything like the extent that the other dimensions have, in fact the heavy rail is a weaker section to resist these loads than the lighter ones. Another stress which strains the web of the rail is that caused by the eccentric application of the vertical load. Owing to the bevel on the wheels of the rolling stock, or to the rail becoming slightly canted through the support of the tie being defective, the load will often be applied on the extreme edge of the head, thereby reducing the vertical strength by little or nothing, but impairing the horizontal strength anywhere from 75% downwards. The English bulb rails, with their thicker webs, symmetrical section, and relatively smaller vertical section modulus, seem in a great many ways a far better design than the deeper tee rails. The chair supports also eliminate to a very great extent the horizontal and torsional strains to which reference has been made.

W. H. WOODCOCK (of Buffalo): In the past few months there has been a great deal of discussion in the various technical papers about the manufacture of steel rails, and at the same time numerous discussions by various railway officials as to why steel rails wear out more quickly now than they did 25 years ago. During 25 years' practical experience in the manufacture of steel of all descriptions, and more especially with that of steel rails, the writer has had the opportunity of following the same carefully. In this period the greatest increase in weight of rails has been made, and also the greatest increase in the weight of railway rolling stock. It is only a few years since the 50-lb. rail was the standard rail throughout the country, and at the time a 5-ton Bessemer converter was considered to be the standard size which could be operated with favorable results. This conclusion was fairly demonstrated by the fact that the rails were guaranteed for a period of time, and their wearing quality justified the guarantee. It occurs to me that in the recent increase in the size of rail two important features have been overlooked by the manufacturers. Twenty-two passes in the rolls were considered sufficient to produce an excellent quality of 50-lb. rail, and 19 to 24 minutes sufficient time to produce a first quality steel from which to roll the same. In progressing from the manufacture of a 50-lb. rail to a 100-lb. rail, and from the use of a 5-ton converter to a 12½ or 15-ton converter, two erroneous suppositions seem to have been made by the steel men of the country. First, because when the 5-ton converter was in use, 19 to 24 minutes were given to the blowing, and good steel was produced, that with 12½ or 15-ton converters from 9 to 11 minutes are sufficient. This is the first cause of bad results. It does not follow that because the blast pressure is increased and the metal blown more quickly that the same quality of metal is secured as when the 5-ton converter was blown for from 19 to 24 minutes; on the contrary, the blowing is too rapid in the latter case to properly purify the metal and, furthermore, the heat is so rapidly generated, in order to produce large tonnage results, that it burns out to a great extent the vitality of the metal. Secondly, that in rolling a 100-lb. rail it is sufficient to give only 15 passes, 9 in the breaking down, and 6 in the finishing. This reduces the mechanical work and, consequently, reduces the life of the rail, for the finishing of these rails with such a small amount of mechanical work only forms a hard film over the surface of the rail and leaves the remainder of the metal spongy. To produce the same results that was obtained with the 50-lb. rail, the bloom for the 100-lb. rail should be increased in proportion to the increased weight of the rail, and the passes, instead of being reduced from 22 to 15, should be increased from 22 to 25. By thus increasing the size of the bloom and the number of passes, the cooling of the rail is made slower during the period in which the mechanical work is being done, consequently the molecular construction of the rail can adjust itself to practically the condition that was obtained in the 50-lb. rail, with the 22 passes. The above statements have been shown to be correct by microscopical observations which I have made on material finished with varied amounts of mechanical work. It is a wrong impression that the same amount of mechanical work and results can be secured from a fewer number of passes that are of a greater draught as are obtained with more passes of smaller draught; a moment's consideration will show that the cooling process cannot be the same with a large draught as it is with one half its size.

Having blown Bessemer steel for some months, I found that by blowing the metal slowly the air is made to penetrate through the mass of metal more uniformly, eliminating the impurities, and allowing of the elements contained to atomically adjust themselves in a more uniform manner. To produce the results desired by the railway companies, it is absolutely necessary that temperature, chemistry, and mechanical work act in harmony with each other to produce a certain metal, and if these three factors are studied as they should be, then a good wearing rail and a fine quality of steel will be obtained. I have heard it stated on many occasions that the cause of rails wearing out so much more rapidly than they did years ago is the fact that motive power and rolling stock are too heavy for the size of rail used now. But has not the weight of the rail increased in proportion to the increased weight of rolling stock? Rails have increased 100%, while cars have increased approximately 50%, so that the above argument does not stand. It is not the fault of the increased weight of the rolling stock, but it is entirely the result of the manufacturers being desirous of securing quantity at the expense of quality, and in this way they have succeeded to a very marked degree.

A practical suggestion as regards the manufacture of rails, would be to have a series of rails rolled specifying that 15, 20 and 25 passes should be given the same, and that the bloom from which they are rolled should be increased in proportion to the increased weight of the rail to admit of these different degrees of mechanical work being done. Then these rails might be placed on the roads having the hardest travel and next to those which are being manufactured to-day in the usual manner. I would not hesitate in predicting that the conclusion, after this test was properly made and carefully watched, would be that the railway companies would say "more mechanical work, if you please, and less

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tonnage." The same argument applies to all classes of steel manufacture. Comparing steel castings of the present day with those which were made even 10 years ago, the verdict certainly is in favor of the castings made a few years ago. In testing the physical quality of castings the first thing one remarks is that the ultimate strength is as good as it was years ago, but there are such divers methods of taking pieces for physical testing that practically any results can be obtained that are specified for. It is not uncommon to go into the various testing rooms and to see the machine operator gauge the test piece, and so secure the approximate area of the same so that he can figure in his mind the load that will be necessary to produce the results required by the specification. It does not materially matter whether the machine is run at 1 or 3 inches a minute after the elastic limit has been reached, the results can not be radically interfered with. From a large number of tests that I made in looking into this matter, I have found that between the slower and higher speeds an increase in ultimate strength of about 500 lbs. per sq. in. was obtained. This would mean that any test-piece within reasonable limits could be made to pass the specification tests. The physical value of steel is determined by two things, the proportion of carbon which it contains, and the rate of cooling. The quality of steel depends upon three things, the material selected, the nature of the working to which it is subjected, and the care taken by the manufacturers. These three things apply to all descriptions of steel having soft to medium qualities. Better results would be obtained by the use of reheated ingots, instead of rolling direct from the initial heat. This would admit of the proper amount of mechanical work being given before the temperature in the rolls became too low. No better rails will be obtained from open hearth steel than from Bessemer, unless more attention is given to the time required for fusing and working in the furnace, and, in fact, the results are more likely to be worse than better.

It was decided to renew the discussion at the beginning of next session and to invite correspondence from all interested in the question.

The foregoing is extracted from the Can. Soc. of C. E.'s bulletin.

Railway Subsidy Contracts.

Under the provisions of the acts relating to granting of aid to certain railways the Dominion Government has entered into the following contracts:

CENTRAL ONTARIO RY.—From near Bancroft, Ont., to the Ottawa Division G.T.R. (Canada Atlantic Ry.) near Whitney, Ont., about 40 miles. (June 10).

COLCHESTER COAL AND RY. CO.—From Debert station, on the Intercolonial Ry., to Debert coal mine, or from Debert coal mine to the northern terminus of Londonderry Iron and Mining Co.'s railway near East Mines, N.S., 4½ miles. (May 20).

KETTLE RIVER VALLEY RY.—From Grand Forks to a point 50 miles up the north fork and west fork of the north fork of Kettle River, B.C., 50 miles. (June 6.)

MARGAREE COAL AND RY. CO.—FROM St. Rose and from a point on the Intercolonial Ry., 38 miles. (June 14).

OTTAWA, NORTHERN AND WESTERN RY.—From Aylmer to Hull, Que., nine miles, (June 12); from the Ottawa and Gatineau Ry. to Hull city boundary, ¼ mile. (June 13).

TILLSONBURG, LAKE ERIE AND PACIFIC RY.—From Woodstock northerly to the G.T.R. at Berlin, or from Ingersoll to Stratford, Ont., 35 miles. June 10).

Quebec and Lake St. John Railway.

Following are facts and figures relating to the operation for the year 1906, in addition to those published, in our June issue:

The total mileage operated by the company's trains during the year was 240 miles, viz., Main line, Quebec to Roberval, 189 miles; Eastern Extension, Chambord to Chicoutimi, 51 miles; and the mileage under construction and approaching completion is: From Jeannotte to La Tuque, 40 miles; from Valcartier towards Gosford, 5½ miles; from Roberval to the Government Wharf, 1 mile; total, 286½ miles. The traffic accounts show net earnings of $198,300, against $175,796 in the previous year. The gross earnings and expenditures are as follows:

	1906	1905
Passenger earnings	$179,067	$167,555
Freight earnings	369,843	340,711
Mails	13,417	13,328
Express, telegraph, parlor and sleeping cars	15,156	13,063
Car rental, etc.	24,593	25,714
Canadian Northern Ry. rental of offices	398	460
Canadian Northern Ry. share of maintenance, Riviere a Pierre Junction	1,065	974
Quebec dock receipts	4,210	2,053
	$607,749	$563,858
Expenditure	409,449	388,062
Net earnings	$198,300	$175,796

The pay lists for the year were $177,172, as against $167,320 in 1905. The cost of fuel consumed during the year was $84,280, against $83,702 in 1905. The average earnings per passenger were 57 6-10 cents, as compared with 57 8-10 cents in 1905, and per ton of freight $1.01½ as compared with $1.01 in 1905. The train mileage for the year 1906 was 379,469 miles, as compared with 370,347 in 1905.

ASSETS.

Main line and equipment		$13,607,980.85
Less Dominion Government bonus	$ 1,002,999.50	
Less Provincial Government bonus	2,368,816.88	
Less Town of Chicoutimi bonus	12,000.00	
		3,383,816.38
		$10,224,164.47
Betterments and terminals:		
Cash disbursed	$1,312,112.94	
Car trust notes	78,264.88	
Mortgages on new property	37,029.16	
		1,427,406.98
La Tuque branch construction:		
Cash disbursements	$ 720,976.67	
Land grant notes current	250,832.34	
	$ 971,809.01	
Less Dominion Government subsidy	150,518.00	
		821,281.01
Gosford branch construction:		
Cash disbursements	$ 22,728.10	
Notes current	6,100.00	
		28,828.10
Lake St. Joseph Hotel Co. stock		8,000.00
Quebec Transport Co.		1,005.00
Lands at La Tuque:		
Cash disbursement	$ 2,648.96	
Amount outstanding	18,000.00	
		20,648.96
Roberval branch to wharf		11,255.97
Steamer Pikouagami		7,060.18
Cash in Quebec Bank		13,863.49
Cash, special funds, in Quebec Bank		7,477.75
Quebec Bank, Savings Department		26,000.00
Bills receivable		500.00
Coal on hand		13,277.24
Mechanical and other stores on hand		18,982.33
Fire insurance, unearned premiums		5,145.25
Great Northern debenture stock		1,050.00
Lower Laurentian Ry.		9,253.38
Lake St. Joseph Hotel Co.		9,018.50
Outstanding accounts due company		31,906.62
		$12,686,125.30

LIABILITIES

Capital stock		$4,303,500.00
City of Quebec stock		220,500.00
Prior lien bonds	£465,000.0.0	2,263,000.00
First mortgage bonds	442,400.0.0	2,153,013.33
Income bonds	640,400.0.0	3,116,613.34
		12,056,626.67
Bills payable:		
Car trust and betterment notes	$ 101,385.98	
La Tuque and Gosford branches—Secured by land grant and subsidies	256,932.34	
Other notes	21,973.38	
		380,291.70
Wages, December		14,297.92
Canadian Northern Quebec Ry.		7,255.03
Mortgage, balance on new terminal property	35,829.16	
Mortgage, balance on lands at La Tuque	18,000.00	
		53,829.16
Outstanding accounts due by the company		35,764.21
		$12,548,064.69
Profit and loss account prior to reorganization (expended in betterments.)		91,159.85
Profit and loss account		46,900.76
		$12,686,125.30

PROFIT AND LOSS ACCOUNT.

Balance from 1905	$ 39,740.70
Accrued interest on prior lien bonds, £11,500 sold in 1906	2,848.88
Net earnings for year ended Dec. 31st, 1906	198,300.40
	$240,889.98
Interest on prior lien bonds, £425,000 at 4%	75,206.22
Interest on first mortgage bonds, £435,950 at 5%	105,876.17
Directors' fees	2,500.00
Glyn, Mills, Currie & Co., commission paying coupons	886.68
Railway Share Trust & Agency Co., fee as bondholders' trustees	1,937.78
Hanson Bros., fee as agents in Canada for bondholders	486.67
Rebate allowed Chicoutimi Pulp Co. on 1905 account	2,213.32
Rebate allowed Ouiatchouan Pulp Co.	62.38
Provincial Government—Tax of $10.00 per mile for years ending June 30, 1903 and 1904	4,820.00
	$193,989.22
Balance	$ 46,900.76

St. Mary's and Western Ontario Ry.—Three gangs of men and 50 teams are reported to be at work between Embro and St. Mary's, Ont., work being started July 9. (June, pg. 409)

The Toronto Auto-Transit Co. has been incorporated under the Dominion Companies' Act, with a capital of $145,000 and offices at Toronto, for a variety of purposes, including the transportation of passengers, or baggage and merchandise from one place to another. It is given power to enter into contracts with railway and express companies, steamboat companies or owners, and owners of all other classes of conveyances, for the conveyance of passengers, baggage and merchandise; to acquire steam and other vessels, etc. The provisional directors are: G. W. Verral, G. W Verral, jr.; C. E. Verral, Miss S. Elliott, and Jas. Balsdon, Toronto.

A company has been incorporated under the Dominion Companies' Act, with the title of Societe Canadienne d'Entreprises Generales a Responsabilite, Limitee, a capital of $500,000 and offices at Montreal, with the object of constructing for itself or others works of all kinds, and specially in connection with the building of railways, tramways, telegraph and telephone lines; the development of hydraulic and electric powers relating to the business of the company, including means of transportation by land and water, wharves, docks and warehouses. The provisional directors are: Hon. R. Dandurand, M. Chevalier, L. Bieque, Montreal; H. Biermans, B. Leman, Shawinigan Falls, Que.

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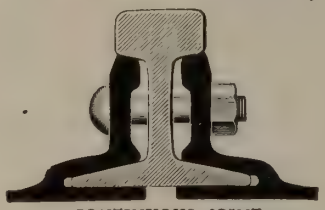

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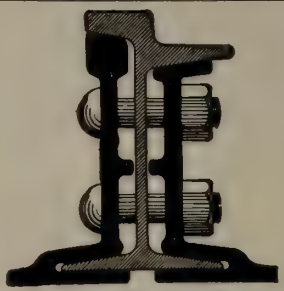

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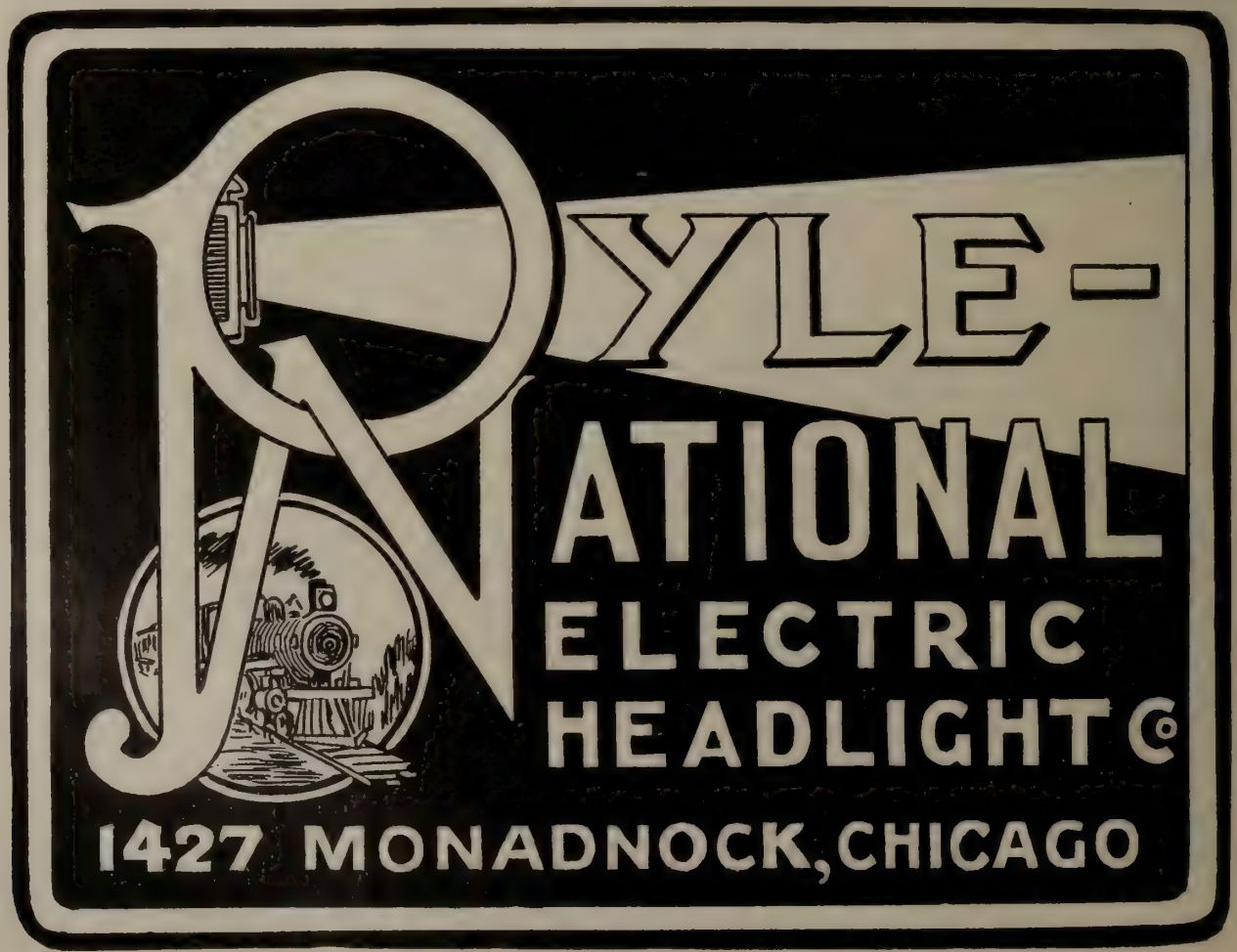

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska Central Ry.—Reports state that the first 50 miles of this line, which is being constructed from Seward, north via Sushitna Valley, to the Tanana River, has been completed, and is being operated. It is stated that by the end of the current year this mileage will be increased to 75 miles. It is expected the road will be completed to the Matunska coal fields by Jan., 1909, the total distance being 183 miles from Seward. The main line of the road, as projected, is to extend through to Fairbanks, a distance of 463 miles. The most costly work involved on the entire route has been done. Seven tunnels have been bored, one of which is in use. The Sushitna Valley to be traversed by the road is 160 miles long and from 60 to 70 wide. Within 100 miles of Fairbanks the line crosses the Alaska range, a low pass affording a 1% gradient. The heaviest gradient on the entire system will not exceed 2%. In addition to the Sushitna Valley and Klatnuska coal fields, the A.C. Ry. will open the Yetna mining district, as well as the Kuskowin or Mount McKinley region, which show rich prospects, but are now without transportation. (Feb., pg. 87).

Atlantic, Quebec and Western Ry.—The Court of Exchequer at Ottawa has confirmed the sale of the Baie des Chaleurs Ry., which has been operated as the Atlantic and Lake Superior Ry., to the A., Q. and W. Ry. This company completed during 1906 about 20 miles of line from New Carlisle, Que., the terminus of the B. des C. Ry., to Port Daniel, and is going on with the construction of its line to Gaspe, a further distance of 80 miles, which it is expected to have completed within a year. The existing line between New Carlisle and Metapedia, where a junction is effected with the Intercolonial Ry., is to be overhauled, gradients reduced and curves taken out, stronger bridges built and heavier rails laid. The company has power to extend its line from Metapedia, Que., to Edmundston, N.B., and the approval of the Dominion Government is being asked for the location plans. (July, pg. 479.)

The Central Ontario Ry. Co. has completed the contract with the Dominion Government by which it will become entitled to the usual subsidy allowances upon the construction of 10 mile sections of the extension of its line from near Bancroft, to the Ottawa Division of the G.T.R. (the old Canada Atlantic Ry.) near Whitney, Ont. (June, pg. 407.)

Colchester Coal and Ry. Co.—A contract has been entered into with the Dominion Government for a subsidy in aid of the construction of 4½ miles of line either from Debert station on the Intercolonial Ry., to Debert Coal Mine, or from the Debert Coal Mine to the northern terminus of the Londonderry Iron and Mining Co.'s railway near East Mines, N.S. The line has been inspected by E. V. Johnson, Inspecting Engineer of the Department of Railways, and opened for traffic. S. Winter, Moncton, is President of the company; J. Hayes, Parrsboro, N.S., Secretary, and A. and W. D. Wheaton were the contractors. (May, pg. 323.)

Duluth, Rainy River and Winnipeg Ry.—It is expected that track will have been laid to the southern shore of Rainy River, opposite Fort Frances, Ont., early in Aug. (July, pg. 479.)

Fort William Union Station.—J. Mills, one of the Board of Railway Commissioners, was quoted July 11 as stating that a union passenger station was practically assured.

Gaspesian Ry.—The Quebec Legislature by an act passed last session incorporated a company with this title for the purpose of constructing a railway from Paspebiac through the county of Bonaventure, not further north than Causapscal, or further south than Cross Point, in the direction of Edmundston or Grand Falls, or to the boundary of the province of Quebec, in a direction between these two places, or to the boundary of the province of Quebec in the direction of the St. John River, N.B. The section extending from Metapedia to Edmundston or Grand Falls, or the St. John River, must be constructed and in operation before the company shall be allowed to run its trains between Metapedia and New Carlisle, and even afterwards the company shall not have power to stop its trains between these two points except for the taking of coal and water.

The company is given various incidental powers respecting wharves, docks, telephone and telegraph lines, steam and other vessels, the development of water powers, etc. It was given power to issue $1,000,000 of common stock and bonds to the extent of $45,000 per mile of railway constructed. The provisional directors are: J. X. Lavoie, Perce, Que.; W. Moffatt, A. W. Carpenter, E. B. Read, J. Mellowes, London, Eng. (Feb., pg. 87.)

Great Northern Ry. United States Lines in Canada.—We have been advised that the company has under construction a line from Walhalla, N.D., to Morden, Man., a distance of about 24 miles. Walhalla is the present terminus of a branch of the G.N.R. extending from Grafton on the Grand Forks-Neche line. This latter line has been extended to Portage la Prairie, Man., about 78 miles, under the charter of the Midland Ry. of Manitoba. The company's other line in Manitoba extends from St. John, N.D., to Brandon, 73 miles, and was constructed under the charter of the Brandon, Saskatchewan and Hudson's Bay Ry. P. E. Thian is Chief Engineer, and A. Guthrie & Co., St. Paul, Minn., constructed the two lines already completed, and are now grading the Walhalla-Morden line. The houses on Ross Ave., Winnipeg, part of which has been acquired by the G.N.R. for terminal purposes, are being moved.

A survey party under B. E. Segar, of the G.N.R. staff, has been working along the Elk River to Michel, B.C. P. E. Thian, the company's engineer at Winnipeg, was recently over a portion of the route, in conjunction with Mr. Segar. The party expected to complete its work early in Aug. The G.N.R. is interested in the Crow's Nest Southern Ry., which extends from Fernie to the International boundary, and to a junction with the G.N.R. line at Rexford, Mont. The Crow's Nest Pass Coal Co., which is also interested in the C.N.S. Ry., owns the Morrissey, Michel and Fernie Ry., which serves a part of the territory at any rate, through which the survey is being made. (July, pg. 479.)

Track is reported laid on the branch from Berthold to Lignite, N.D., 66 miles, and progress is being made with the construction between Lignite and Crosby, a further distance of 33 miles. Berthold is 23 miles west of Minot, the point at which the Minneapolis, St. Paul and Sault Ste. Marie Ry. from St. Paul, Minn., to the C.P.R. main line in Saskatchewan, crosses the G.N.R., and the branch parallels this line until near the International boundary, when it takes a westerly direction to Crosby, just south of the boundary.

Halifax and Southwestern Ry.—The substructure of the permanent bridge across the river at Liverpool, N.S., was expected to be completed by the end of July, when the steel superstructure would be erected. The bridge will consist of six spans of 66 ft. each, and one draw span of 132 ft., and the substructure consists of five concrete piers and abutments. The foundations of the piers and abutments are on solid rock, about 2,000 yards of concrete being used in their construction. As soon as the new bridge is completed the temporary bridge which has been in use during the past two years will be removed. The substructure was erected by the Lindsay Construction Co. (July, pg. 479.)

Intercolonial Ry.—The second-track work between Moncton and Painsec Junction, N.B., about eight miles, for which a contract has been let to J. B. McManus, Ltd., Memramcook, N.B., is being gone on with, and will be pushed through as fast as possible. (July, pg. 479.)

International Ry. of New Brunswick.—T. Malcolm, contractor for this line, brought out from Great Britain 270 men, advancing their passage money. Up to July 6 about 100 of them had run away after having complained of the camp accommodation. The men had signed contracts to work for six months, and several of them have been placed under arrest for breach of contract.

Kettle Valley Lines.—Work on the extension of the company's line has been so far completed as to enable trains from Republic, Wash., to be run into Grand Forks, B.C., at Third and Bridge streets, where a station is being erected. Heretofore the trains had to stop about 500 yards short of this point. The extension under construction extends from Grand Forks, up the north fork and up the west fork of the north fork of the Kettle River, for 50 miles. The company has entered into the usual agreement with the Dominion Government, under which a subsidy of not more than $6,400 a mile will be paid towards the construction of the line. (May, pg. 325.)

Kingston, Smith's Falls and Ottawa Ry.—Surveys for this line show a route leaving the G.T.R. main line about six miles east of Kingston, and going practically direct to Ottawa, about 70 miles. One hundred men started grading at the Ottawa end July 2. R. S. Logan, assistant to the Second Vice-President and General Manager G.T.R., stated recently in Montreal that the people engaged in promoting the construction of the line contemplated giving the G.T.R. an interest in it, and establishing friendly connections with the larger line. "We will interchange passengers," he said, "and probably run through cars. On account of these friendly relations it is the desire of the G.T.R. to encourage the new road and support it as much as possible." (July, pg. 479.)

Little Nation Ry.—By an act passed last session of the Quebec Legislature a company with this title, and the provisional directors already mentioned, was incorporated, the head office being fixed at Cheneville, Que., and the capital at $400,000, with power to increase to $1,000,000. The company is authorized to construct a line from between Thurso and Montebello, on the left bank of the Ottawa River, to Cheneville, and northerly to Lake Nomininguè, near the C.P.R., with branch lines, not to exceed in any one case 15 miles in length. It is also provided that "the railway shall be operated by means of trains, as on steam lines, or of separate cars, as on tramways; and the traction shall be effected by electricity, steam, gasolene, or in any other manner that may seem more advantageous to the company. Passengers and freight may be carried by the same trains or by separate trains." (Feb., pg. 89.)

Liverpool and Milton Ry.—This short line, which will shortly be absorbed by the Hali-

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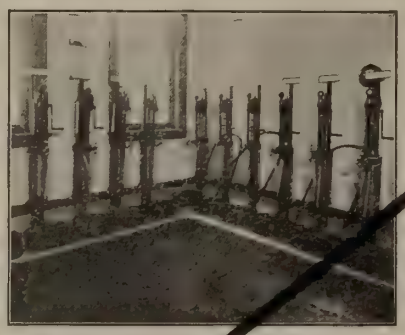

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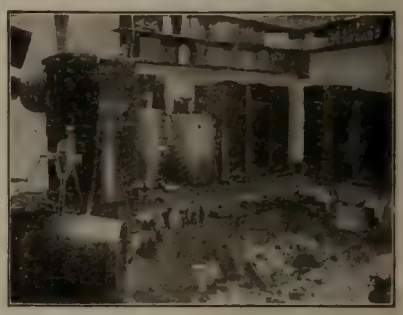

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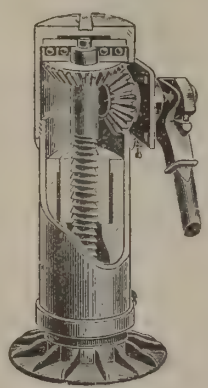
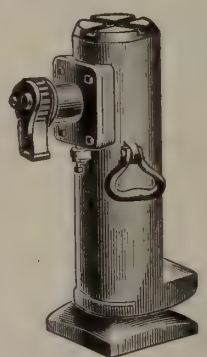


Sectional View



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fax and Southwestern Ry., and operated as a branch line, is being regarded and generally overhauled. It is being extended to the head of the wharves and a connection is being made with the H. and S.W. Ry. The addition to the line involves the construction of 1,400 ft. of trestle. The work is being done by the Lindsay Construction Co. (See Milton and Liverpool Ry., Jan., pg. 3.)

London and Port Stanley Ry.—The bridge being constructed over the Thames at London, Ont., by the Pere Marquette Rd., lessees of the L. and P.S.R., will be capable of carrying the heaviest traffic. The abutments are being extended to double their present width, and a pier is being erected in the center of the river. As soon as the erection of this bridge is completed a similar one will be built over the Kettle Creek, near St. Thomas, to replace the present bridge. (July, pg. 479.)

Lotbiniere and Megantic Ry.—By an act passed at the recent session of the Quebec Legislature this company is vested with all the rights and privileges required to construct and operate a railway from its existing line across the counties of Wolfe, Richmond, and Sherbrooke to Sherbrooke city, with power to construct branch lines, not exceeding 15 miles in length in any one case, except for the purpose of connecting with other railways. (Feb., pg. 89.)

Magdalen River Valley Ry.—C. W. Mullen, S. W. Boardman, Bangor, Me.; C. D. Laning, Boston, Mass.; J. O. Drouin, E. Brassard, Montreal, were last session of the Quebec Legislature given an act incorporating a company with this title, with office at Quebec, and power to construct a railway from Denone tp. to the east of Cap a la Ours, Gaspe county, along the Magdalen River valley, to connect with the proposed inland section of the Atlantic, Quebec and Western Ry. (Mar., pg. 161.)

Margaree Coal and Ry. Co.—The Dominion Government and the company have completed the agreement under which a minimum subsidy of $3,200 a mile will be paid to the company towards the cost of the construction of a line from St. Rose, and from a point on the Intercolonial Ry., altogether not exceeding 38 miles. (May, pg. 325.)

Maritime Coal, Ry. and Power Co.—The railway line operated by the company, prior to its absorption of the Canada Coal and Rd. Co., extended from Chignecto to Maccan, N.S., about three miles. The additional line acquired extends from Maccan to the Bay of Fundy. The company is building new bridges across the rivers Maccan and Hebert. A survey is being made for a branch from the main line at Fundy to the new slope which is being opened up there, a distance of about one mile. The company has charter powers to construct a line to a port on Northumberland Strait, and we are advised that the port which will probably be used is Tidnish. (July, pg. 479.)

Metabouchouan Pulp Co.—By an act passed last session of the Quebec Legislature the agreement between the shareholders and a syndicate for the reorganization of the company was confirmed, and its name was changed to that of the Metabouchouan Co. The capital was reduced to $158,000. but the shareholders have power to increase it to $1,000,000. The schedules attached to the act set out the property affected by the arrangement. This includes all rights and interests of the Pulp Co. in a railway to connect its works at St. Andre de l'Epouvante to its point of intersection with the Quebec and Lake St. John Ry., near Lake Bouchette, about 11½ miles, all the rights and interests of the Pulp Co. under the Dominion Act 3 Edward VII, chap. 47, sec. 57, to a subsidy for a railway of 13 miles at the most, running from Lake Bouchette station on the Q. and L. St. J. R. to St. Andre; all the right and interest of the Pulp Co. in any claim against the Quebec Government to a land subsidy in respect of the line; one locomotive and some logging rolling stock.

Minnesota and International Ry.—Track has been laid as far as Little Fork, Minn., and it was expected that an accommodation train would be put on by the end of Aug. The President and Chief Engineer recently visited Fort Frances, Ont., with a view of completing arrangements for the entrance of the line, and the securing of terminals in that place. (Jan., pg. 3.)

Northern Empire Ry.—The route of this projected railway, which the Dominion Parliament will be asked next session to authorize, will pass through the wheat lands of Southern Alberta, the coal lands, and the partially opened territory of the north of the province where explorations for oil and gas are being made. From the International boundary near Cardston to Fort McMurray, on the Athabasca River, the points mentioned in the application to Parliament is about 600 miles, and branch lines are projected, giving in all a mileage of about 2,000 miles. It is stated in Cardston, Alta., from which point exploratory surveys have been made northwards, that interests connected with the Northern Pacific Rd. are engaged in the promotion of the new line. (June, pg. 409.)

The Pontiac Central Ry. Co. was incorporated by an act passed at the recent session of the Quebec Legislature for the purpose of constructing a railway from Bryson or Portage du Fort, following when practicable the valley of the Colonge River to a junction with the National Transcontinental Ry., together with branch lines. The provisional directors of the company are: R. Bickerdike, M.P.; T. Gauthier, D. A. Campbell, J. M. R. Trudeau, J. G. A. Gendreau, R. S. Weir, A. Hudon, Montreal. (Feb., pg. 89.)

Prince Edward Island Ry.—Tenders are under consideration for the erection of a brick freight shed at Charlottetown, P.E.I. The building is to be 179 ft. long and 35 ft. wide, walls of brick on reinforced concrete beams and piers. The roof is to be of wood with a special covering. There is to be erected adjoining an office building about 50 ft. in length, and two stories in height. It is expected to have the building completed in the fall. An extension of similar dimensions will be constructed at some future period. (May, pg. 327).

Quebec Eastern Ry.—By an act passed last session of the Quebec Legislature a company was incorporated with this title and having as its provisional directors F. N. McCrea, Sherbrooke, Que.; E. W. Tobin, M.P., Bromptonville, Que.; J. A. Begin, M.P., B. Quinn, J. W. Quinn, Windsor Mills, Que.; with the object of constructing the following lines of railway: From Sherbrooke by any practicable route through the counties of Sherbrooke, Richmond, Wolfe, Megantic, Lotbiniere and Levis to the southern end of the Quebec Bridge; from the above line to Lyster station, and with power to acquire and operate the existing line between Lyster station and St. Jean des Chaillons (the Lotbiniere and Megantic Ry.); from the first mentioned line to Lime Ridge, with other branch lines not exceeding in any one case, 15 miles. Power is also given to make agreements with the Quebec Bridge and Ry. Co., and other railway companies for running rights, etc., and to acquire the property, powers, rights, franchises, etc., of the Lotbiniere and Megantic Ry., and the Wolfe, Megantic and Lotbiniere Ry., or for leasing the same. The company may use electricity for the operation of its railway or any part of it. The company may issue $1,000,000 of common stock and bonds not exceeding $30,000 per mile of railway constructed. See also Lotbiniere and Megantic Ry. (April, pg. 245.)

Quebec, Montreal and Southern Ry.—Among the sums voted at the last session of the Quebec Legislature was $8,900 for the South Shore Ry., for the construction of bridges over the St. Francis and Yamaska rivers, being the third of ten equal payments. The S.S.R. is now part of the Quebec, Montreal and Southern Ry. (April, pg. 245.)

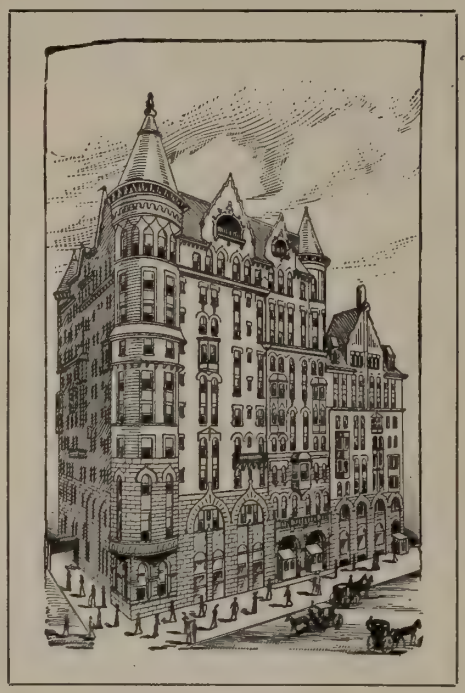
St. Maurice Valley Ry.—An inspection of this line, now being operated by the C.P.R. from Three Rivers to Shawinigan Falls, Que., 22 miles, was made July 3, by Hon. W. A. Weir, Minister of Public Works, Quebec; L. A. Vallee, Chief Engineer of the Department; F. P. Gutelius, Assistant Chief Engineer C.P.R., and others interested in the line. It was stated that the company proposed to extend its line from the present junction with the C.P.R. to the wharves at Three Rivers, so as to give the manufacturing interests along the St. Maurice connection with the ocean-going steamers. It is also intended at some future date to extend the line a few miles beyond Shawinigan Falls, to Grande Piles, at which point the St. Maurice River becomes navigable. (Feb., pg. 89).

Temiscamingue, Chibougamon and James Bay Ry.—The Quebec Legislature at its last session passed an act incorporating Hon. E. B. Garneau, Quebec; G. DeSerres, J. M. Wilson, G. Marlett, Montreal; J. A. Kelly, New York City, as a company with this title for the purpose of constructing a railway from the east side of Lake Temiskaming northeasterly to the Harricanaw River, thence along the Sand River valley to James Bay, with a branch to Lake Manouan; also a line commencing at Lake Manouan northeasterly to Lake Wattagami, and following the Nottaway River to James Bay, with a branch to Chibougamon and Lake Mistassini. The company is given power to construct telegraph and telephone lines, wharves, and docks, and to own and operate steam and other vessels. It is also given power to make agreements for various purposes with other similar companies, is authorized to issue $1,000,000 of capital stock, and bonds to the extent of $45,000 a mile of railway constructed. It is also given power to acquire lands and water powers, to develop electrical energy, and to transmit the same for use in any factory it may erect or acquire for manufacturing purposes, or to sell the power generally. (Feb., pg. 87.)

J. R. Booth has arranged with the commission to construct a private siding from Latchford, Ont., for the accommodation of cars carrying supplies for the working of his pulpwood concessions on the Montreal River.

Theodosia Arm.—Arrangements have been completed for the construction of a logging railway, 16 miles long, along Theodosia Arm, B.C. T. Merrill, Duluth, Minn., is the lumberman leasing the limits which the proposed railway is to open up.

Toronto Union Station.—Very little appears to have been done in the way of advancing the project for the erection of a new union station at Toronto. The following letter dated Ottawa, July 9, from the Secretary of the Board of Railway Commissioners, was read at a meeting of the Toronto Board of Control, July 10: "I am directed by the Board to state that the Board thinks there should not be any further considerable delay in settling the plans of the Union



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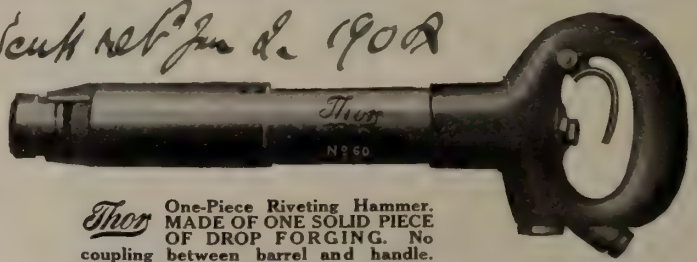

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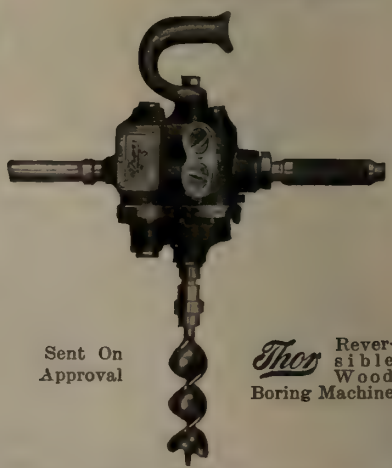

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station in Toronto and matters connected therewith, and in settling the question whether railway tracks in Toronto are to be raised or depressed in different parts of the city, and whether any or what further bridges should be built for carrying streets over railways along the waterfront in Toronto, or other measures taken for the protection of such crossings, and whether any change is to be made in the location or height of the railway tracks, which would affect the construction of the bridge at the Sunnyside crossing. I am directed to say, therefore, that the Board requires that the railway companies interested submit to the Board on or before Sept. 1 next, the plans of the proposed new union passenger station in Toronto, and that the railway companies and the city of Toronto, or either of them, shall, on or before Sept. 1 next, submit to the Board any proposition that they, or any of them, may desire to make on the above subject, and that on or before that date the G.T.R. shall submit any proposition that it may have for any change in regard to its tracks which will affect the location or plans of the bridge at the Sunnyside crossing, the construction of which the Board has already announced that it will require."

Victoria Terminal Ry. and Ferry Co.—Plans have been deposited with the Minister of Public Works, Ottawa, and in the Land Registry office, New Westminster, B.C., for bridges to be constructed by the V.T.R. and F. Co., over the Nicomekl and Serpentine rivers on the company's railway between Blaine and Olivers, B.C. The approval of the Government is being asked for the construction of the bridge.

Winnipeg City Power Line.—The Winnipeg City Council has authorized the purchase of steel rails for the section of the tramway between Lac du Bonnet and the site of the proposed bridge, 2¼ miles. The bridge is to be built by day labor, of wooden crib with plate girders. Grading of the line to the bridge was expected to be completed by Aug. 1. (July, pg. 481.)

New Brunswick Southern Ry.—Reports from St. John, N.B., state 15 cars of ties have been delivered by the C.P.R. at St. Stephen, N.B., and they are being put in on the N.B.S. Ry.; and that two C.P.R. steam shovels are working on the line, one at the St. John end, and the other at the St. Stephen end. These facts, together with the additional one that the N.B.S. Ry. trains run over a portion of the C.P.R. line, and use that company's station in St. John, have given rise to local reports that the C.P.R. has purchased the line.

Orford Mountain Ry.—A regular train service was inaugurated to Mansonville, Que., July 12, to which point the line has recently been extended. The railway now extends from Eastman, on the C.P.R. line, to Mansonville, and from Eastman to the G.T.R. at Windsor Mills, a total distance of 60 miles. It is stated that the line will be extended from Windsor Mills to Brompton Falls and thence to Sherbrooke. S. W. Foster, President of the O.M. Ry., is also interested in the construction of the Midland Ry. of Vermont, with which the O.M. Ry. will connect. (May, pg. 327).

The following are members of the board of management of the Provident Fund of the Intercolonial Ry., and Prince Edward Island Ry., to be administered under the act passed last session of the Dominion Parliament: D. Pottinger, General Manager, who is chairman under the act; T. C. Burpee, Engineer of Maintenance of Way, Moncton, N.B.; and W. A. Dube, Superintendent, Levis, Que., appointed by the management; J. Stewart, Moncton; and J. W. Nairn, Truro, N.S., elected by the men.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,900	324,200	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	13,800−
Jan...	351,400	410,300	58,900−	158,200−
Feb..	333,200	363,600	30,400−	113,900−
Mar.	488,800	394,800	94,000	23,400−
April	569,900	465,200	104,700	91,000−
May.	870,600	512,500	358,100	145,600+
	$6,530,000	$4,744,900	$1,785,100	$ 86,800+

Approximate earnings for June $963,100 against $612,100 for June, 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug.	6 170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122.94	98,188.05−
Dec.	5,992,098.07	3,726,503.73	2,265,594.34	80,988.97−
Jan..	4,205,527.07	3,657,199.46	548,327.61	718,906.41−
Feb..	4,268,206.74	3,646,218.62	621,988.12	583,755.66−
Mar.	6,132,910.76	3,887,174.54	2,245,736.22	401,071.72+
Apl..	6,391,561.39	4,024,635.52	2,366,925.87	24,367.03+
May	6,937,135.20	4,417,777.19	2,519,358.01	331,695.38+
	$65,399,815.23	$42,511,612.70	$22,888,202.53	$1,852,939.66+

Approximate earnings for June $6,740,000 against $5,420,000 for June, 1906.

Duluth, South Shore and Atlantic Ry.—Gross earnings for May $313,246.64, net earnings, $102,559.51 against $269,725.87 gross and $88,421.02 net for May, 1906. Net earnings for eleven months ended May 31, $902,748.79 against $911,114.56 for same period, 1905-06. Approximate earnings for June, $308,835, against $265,064 for June, 1906.

Mineral Range Ry.—Approximate earnings for June, $66,152 against $54,416 for June, 1906.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—Gross earnings for May, $1,285,838.64; net earnings $563,387.32, against $937,266.11 gross and $380,896.18 net for May, 1906. Net earnings for eleven months ended May 31, $5,017,755.55 against $5,364,369.94 for same period 1905-06. Approximate earnings for June, $1,137,348 against $959,286 for June, 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings and expenses of the G.T.R., the Canada Atlantic Ry., the G.T. Western Ry., and the Detroit, Grand Haven and Milwaukee Ry., separately for May, as compared with May, 1906.

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$3,160,880	$2,708,694
Expenses	1,986,130	1,667,975
Net earnings	$1,174,750	$1,040,719

CANADA ATLANTIC RAILWAY.

Earnings	$ 158,600	$ 190,417
Expenses	173,900	162,658
Net earnings....Def.	$ 15,300	$ 27,759

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 478,600	$ 400,801
Expenses	413,900	342,848
Net earnings	$ 64,700	$ 57,953

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 110,500	$ 106,166
Expenses	109,200	99,348
Net earnings	$ 1,300	$ 6,818

Approximate earnings for June, $3,828,780 against $3,559,500 for June, 1906.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to June 30:

	1907.	1906.	Increase.	Decrease.
Grand Trunk	£3,390,817	£3,021,129	£369,688	....
Canada Atlantic	173,957	190,997	...	£17,040
G. T. Western	594,462	515,744	78,718	....
D. G. H. & M.	163,922	157,795	6,127	....
Total.....	£4,323,158	£3,885,665	£437,493	

F. P. Megan, Editor Industrial Canada, writes: "I appreciate very much The Railway and Marine World, and look on it as one of our best exchanges."

Regulations Respecting Wooden Trestles.

The Board of Railway Commissioners passed the following order, No. 3239, July 3: In pursuance of the powers conferred upon it by the Railway Act, secs. 30 and 269, and of all other powers possessed by the Board in that behalf, the Board orders as follows:

1. Every railway company subject to the legislative authority of the Parliament of Canada, operating by steam power any railway or railways, any part or parts of which is or are constructed of or upon wooden trestles, shall, during the months of May, June, July, Aug., and Sept., in each year, for the purpose of protecting such trestles from fire, place and keep upon every portion of its said railway or railways, where such trestles exist, watchmen to the extent hereinafter required, and cause such watchmen to inspect every such trestle as soon as possible after the passage of a train or locomotive over the same; provided, that this clause shall not require any such watchman to discontinue the following of one train to and over any other wooden trestle on his division in the direction in which such train is going.

2. Where a track bicycle is provided for his use, one watchman may be appointed for and have charge of a distance of five miles along the railway for the purposes aforesaid; but where no such bicycle is provided, a watchman shall not be appointed for or have charge of more than 2½ miles along the railway.

3. Every such company shall supply each of such watchmen and keep him supplied with two pails, and keep the same in good condition and fit for holding water.

4. Each such company shall place and maintain at each end of every such trestle a barrel of the capacity of not less than 45 gallons; and that, on every trestle of over 200 ft. long, every such company shall place and maintain barrels of similar capacity at distances of not more than 100 ft. apart, provided that pile trestles crossing waterways shall not be required to be furnished with any such barrels.

5. Every such company shall maintain and keep every such barrel in good repair and in good condition for holding water, and cause such barrels to be kept full of water except so far as the water shall be reasonably and properly used for the protection of the trestle, or as it may be lowered by natural causes; provided, that as often as the surface of the water shall be lowered in any such barrel to the extent of 15 ins. from the top of the barrel, such company shall cause the barrel to be forthwth refilled with water.

6. Every such company shall remove and keep clear from dead grass and brush the whole width of its right of way under and along every such trestle.

7. Every such watchman shall, from time to time, when any such trestle is injured by fire, as soon as possible report the same to the roadmaster on whose division he is working; in the event of any such barrel or pail not being in good and efficient condition for the holding of water, every such watchman having charge of the same shall, as soon as possible, report such condition to the said roadmaster; that whenever the height of the water in any such barrel is lowered to the extent of 15 ins. from the top of the barrel, every such watchman shall, as soon as possible, report the same to the said road-master.

8. Every such company failing or neglecting to comply with any of the foregoing regulations shall be subject to a penalty of $50. Every watchman failing or neglecting to make inspection of any trestle in accordance with the foregoing regulations, or failing or neglecting to make any of the reports hereinbefore required of him when and as so required, shall be subject to a penalty of $20 for each such failure or neglect.

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The International and Toronto Board of Trade Freight Rate Cases.

The Board of Railway Commissioners issued order 3258, July 6, as follows: In the matter of the applications of the Canadian Manufacturers' Association and the shippers who were heard and represented at the hearings held by the Board in Windsor and Chatham, Ont., in May, 1906; and of the Toronto Board of Trade of the City of Toronto, upon hearing what was alleged on behalf of the applicants and counsel for the railway companies, the evidence adduced, and upon the report and recommendation of its Chief Traffic Officer, the Board orders:

(a) That the special local class tariffs (known as "town tariffs") of the G.T.R. Co., the C.P.R. Co., the Michigan Central Rd. Co., the Pere Marquette Rd. Co., the Wabash Rd. Co., the Toronto, Hamilton and Buffalo Ry. Co., and the Canadian Northern Ontario Ry. Co., east of the Detroit and St. Clair rivers, Lake Huron, and the Georgian Bay, and North Bay (east and south bound), and south of the Ottawa River, be reduced so as to place them all on the same mileage scale; and that for this purpose the table of mileage rates, particularly set forth in the schedule hereto annexed, marked A, which is hereby made part of this order, be adopted as the bases by the said companies, subject to such reductions from the said mileage table between common or competitive points as may be considered necessary under the authority contained in the Railway Act, secs. 315 and 329, the rates in all cases to be based on the shortest workable mileage; subject also to Toronto rates on the basis of 36c. 1st class as the maxima from points on the Canadian side of the Detroit and St. Clair rivers to points intermediate to Toronto; and to the present rates as the maxima from Hamilton to points north of Beeton Jct. and Allandale.

(b) That, subject to clause d of this order, for the purpose of compiling through special winter and summer class freight tariffs from points west of Toronto to points east thereof, the territory south of and including the G.T.R. Co.'s main line Toronto to Point Edward, via Stratford, be divided into groups on the principle now existing, but modified by the mileage table referred to in clause a of this order; all points on the Welland Canal to be included in the Fort Erie-Stoney Creek group, and the rates to Montreal to be as outlined in the memorandum of the Toronto conference of May 23, 1907, as follows:

1st Class From—	
Windsor, Amherstburg, Courtright, Sarnia, Newbury, Alvinston, and Forrest	58c.
From Intermediate points east to and including Hyde Park	56c.
London, St. Thomas, St. Marys, Thamesford, Port Burwell, and Port Rowan	54c.
Woodstock, Ingersoll, Stratford, Waterford, and Port Dover	52c.
Berlin, Galt, Brantford	50c.
Guelph	48c.
Fort Erie, Suspension Bridge, Port Colborne, Welland St. Catharines, Grimsby	48c.
Hamilton, Dundas, Oakville, and Georgetown	46c.
Toronto	44c.

(c) That the territory north of that covered by clause b and west of and including the G.T.R. Co.'s line between Toronto and Barrie, be similarly grouped and the rate table referred to in clause a applied, but with the rates for equal distances in the territory covered by clause b as minima.

(d) That from points competitive with the lake and river lines, the companies may publish from and to such competitive points, during the season of navigation, such commodity rates as may be necessary to meet the competition of the water carriers, and shall also publish from Toronto and Hamilton to Ottawa and Montreal, and intermediate points, competitive class tariffs on the basis now existing, but not to exceed the mileage rates referred to in the said clause a.

(e) That the through rates from the aforesaid groups be reasonably graduated to points east of Toronto on the basis outlined for the G.T.R. Co.'s main line at the Toronto conference of May 23, 1907; with corresponding scaling along the C.P.R. Co.'s line.

(f) That the east bound rates from the territory east of Toronto and Orillia, and east of and including Depot Harbor, Parry Sound and North Bay, be in accordance with the mileage table referred to in clause a, having regard to the adjoining group rates under clause c.

(g) That to points in Quebec west and east of Hull, and east and south of Montreal, on the G.T.R. and C.P.R. companies, the through rates from the grouped territory as defined in clauses b and c, be arrived at in accordance with the following scale, namely:

First-Class To—	
Aylmer	4c. over Hull
Gatineau to Buckingham, inclusive	6c. over Hull
East of Buckingham Junction to and including St. Augustine; north and south of Ste. Therese Junction to and including St. Jerome and St. Eustache	8c. over Montreal.
Ste. Therese Junction to Ste. Rose, inclusive	4c. " "
St. Vincent de Paul to Joliette, inclusive	4c. " "
Lanorais to Three Rivers, inclusive including Berthier	8c. " "
East of Three Rivers to Quebec, inclusive	10c. " "
East and south of Montreal to and including Ste. Rosalie, St. Johns, St. Isidore, Howick Junction and Ste. Cecile Junction	4c. " "
Doucet's Landing, Victoriaville, Dixville, and east of Ste. Rosalie, also south of points named in preceding group (C.P.R. group to correspond)	8c. " "
East of Victoriaville to Point Levis	10c. " "

(h) That no special commodity rates now existing, which may be lower than the corresponding class tariff rates herein prescribed, shall be advanced by reason of the changes herein ordered, or without the sanction of the Board.

(i) That the said railway companies and their connections in the United States be permitted to substitute the Canadian Freight Classification for the Official Classification from Detroit and Port Huron, and from points west thereof via the Detroit and St. Clair River crossings; also from Buffalo and Suspension Bridge, N.Y.; and, where necessary, from points south and west thereof via the Niagara frontier; and to scale the lower classes on the first-class rates now existing.

(j) That the rates from Canadian points on the Detroit and St. Clair river frontier to all points east to the Atlantic and north to the Ottawa River shall in no case exceed the rates from Detroit and Port Huron.

(k) That in the adjustment of the international rates referred to in clause i, the rates on raw materials from points in the United States to points in Canada shall not be advanced at the instance, direct or indirect, of the companies operating in Canada, by reason of the changes in the rate basis herein permitted or prescribed.

(l) That no change shall be made in the west bound rates from Montreal to the grouped territory west of and including Toronto and intermediate points, as a consequence of this order of the Board.

SCHEDULE "A"

Distance Groups Miles				First-Class rates per 100 lbs
To	5	miles		8 cents.
6 "	10	"		10 "
11 "	15	"		12 "
16 "	20	"		14 "
21 "	30	"		16 "
31 "	40	"		18 "

SCHEDULE "A"—Continued.

Distance Groups Miles				First-Class rates per 100 lbs
41 To	50	miles		20 cents.
51 "	60	"		22 "
61 "	70	"		24 "
71 "	80	"		26 "
81 "	95	"		28 "
96 "	110	"		30 "
111 "	140	"		32 "
141 "	170	"		34 "
171 "	200	"		36 "
201 "	230	"		38 "
231 "	260	"		40 "
261 "	290	"		42 "
291 "	320	"		44 "
321 "	350	"		46 "
351 "	380	"		48 "
381 "	410	"		50 "
411 "	440	"		52 "
441 "	480	"		54 "
481 "	520	"		56 "
521 "	560	"		58 "

CHIEF TRAFFIC OFFICER'S REPORT.

Following is the Report of the Chief Traffic Officer, J. Hardwell:

The so-called international rate case refers to discrepancies between the east and north bound freight rates from Canadian points on the St. Clair, Detroit and Niagara River frontiers, as compared with those from U.S. frontier points, viz., Port Huron, Detroit and Buffalo; the Canadian rates being the higher, in contravention, so it is complained to the Board, of the long and short haul provisions of sec. 315 of the Railway Act. This has been a burning question for many years past, but it was not formally brought before the Board until its hearings at Windsor and Chatham in May, 1906. The application of the Toronto Board of Trade, heard by the Board of Railway Commissioners at Toronto May 29, 1906, is, in effect, that the freight rates from Toronto to Montreal and other points east shall not exceed (as they do) the west bound rates from the same eastern points to Toronto; also, that certain discrepancies which exist between the Toronto local tariff and the local tariffs at Hamilton and London, to the disadvantage of Toronto, be removed. As to this latter application of the Toronto Board of Trade, I reported to the Board on July 30, 1906, making certain recommendations, which, if adopted, would have the desired effect; but in that report I pointed out that "the true solution was to be found in a general re-arrangement of all the class rates between all points, and not merely as they affected Toronto, or Toronto, Hamilton, and London." It became evident at the outset of the investigation following the hearings that the two cases would have to be considered together, to which course the Canadian Manufacturers' Association, who had adopted the international rate case, consented; the Toronto Board of Trade demurred, but withdrew its objections after I had explained the situation to its transportation committee at a conference in Toronto on March 19 last. Any reductions in rates from the frontier points in the manufacturers' case would necessarily affect the east bound rates from Toronto, for the intermediate rates from Chatham, London, Brantford, Hamilton and Toronto would have to be scaled down on the Windsor basis, so that the two cases would become dovetailed; then again, the revision of the general mileage scale, which would be a factor in the adjustment of the manufacturers' case, would have a direct bearing on the discrepancies between the local tariffs of which the Toronto Board complained, and would probably remove them; and finally, were that Board's application for the west bound rates east bound to be granted, any adjustment of the international rates which may have been worked out would be destroyed, for the bases would be entirely different. Briefly, the Toronto applications were included in the broader application of the manufacturers.

In discussing the international rates I propose, for the sake of brevity, to mention more particularly the rates to Toronto and

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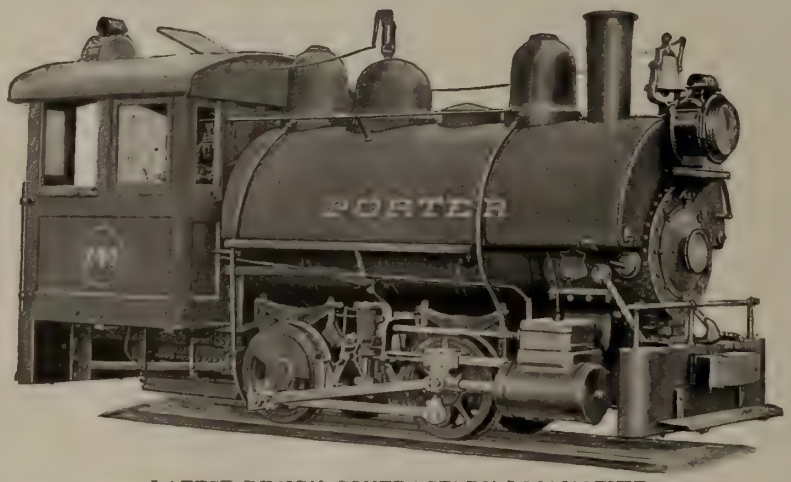

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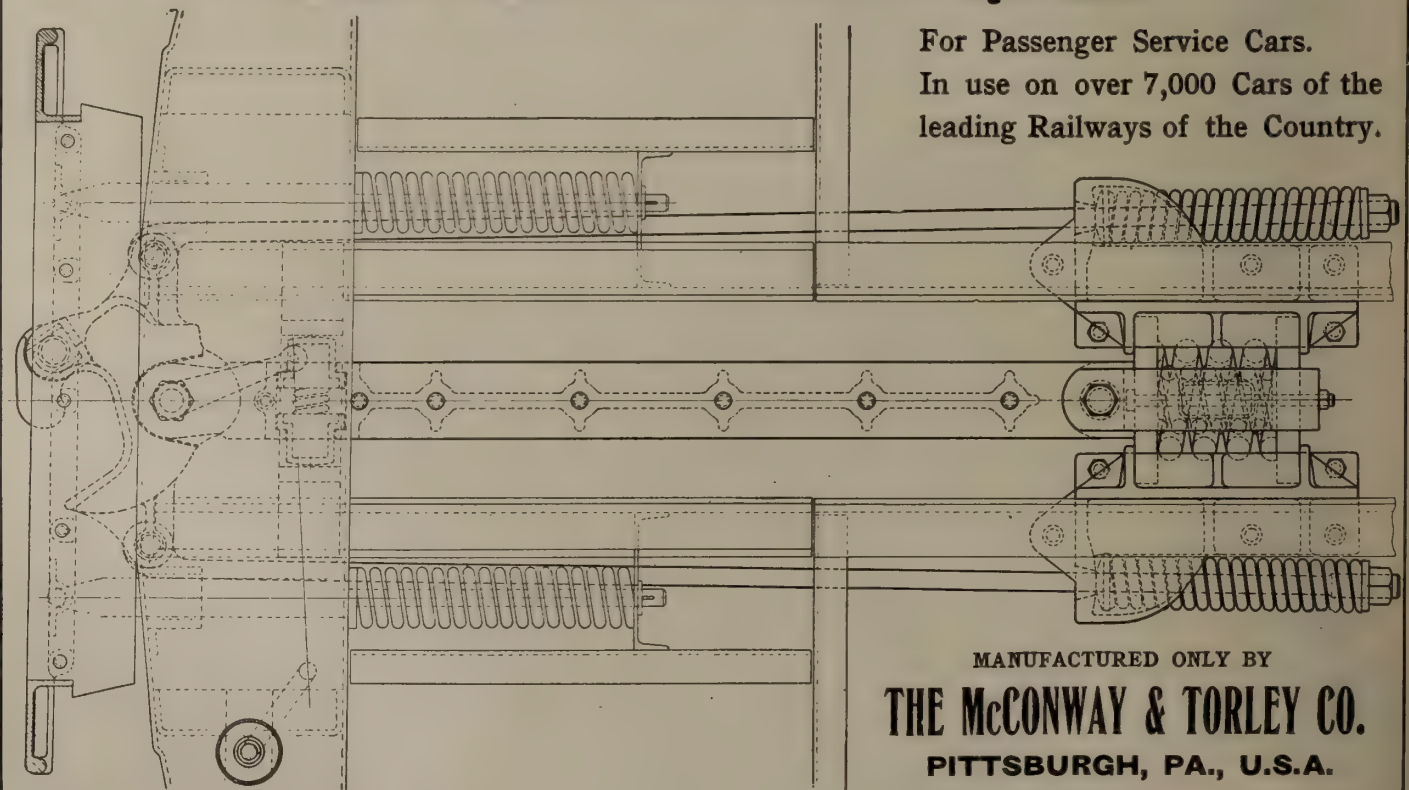

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Montreal as being the most important points —the key points in fact—but it will be understood, generally speaking, that all other points east of the lakes are affected under the scaling system. The following are the present class rates from the frontier points. More detailed figures will be found in the appendices to this report:

TO TORONTO

FROM	1	2	3	4	5	6	7	8	9	10
Detroit	36	31	23	16	13	10	Official Classification			
Windsor	40	35	30	25	20	18	16	16	16	14
Port Huron	36	31	23	16	13	10	Official Classification			
Sarnia	38	33	29	24	19	17	15	15	15	13
Buffalo	30	26	20	15	12	10	Official Classification			
Fort Erie	30	26	23	19	15	13	11	11	12	10

TO MONTREAL

FROM	1	2	3	4	5	6	7	8	9	10
Detroit	58½	50½	39	27½	23½	19½	Official Classification			
Windsor (winter)	70	61	53	44	35	33	24	25	27	23
" (summer)	60	53	45	38	30	30	21	—	—	20
Port Huron	58½	50½	39	27½	23½	19½	Official Classification			
Sarnia (winter)	70	61	53	44	35	33	24	25	27	23
" (summer)	60	53	45	38	30	30	21	—	—	20
Buffalo	44	38	30½	21½	18½	15	Official Classification			
Fort Erie (winter)	60	53	45	38	30	28	21	22	24	20
" (summer)	56	49	42	35	28	28	20	—	—	19

On July 4, 1906, the Secretary of the Board, by direction, wrote the G.T.R. Freight Traffic Manager, as chairman of the advisory committee of the Canadian Freight Association, reciting the nature of the complaint with respect to the international rates, and concluding as follows: "The Board recognizes that the conditions of this traffic are affected by the existence of companies in the U.S. independent of those operating in Canada, and by the operation of the corresponding clause (the long and short haul) in the U.S. statute law, and that the harmonizing of interests in making the changes necessary to apply the rule to traffic originating in the U.S. destined for points in Canada is a work of difficulty, and it thinks the Canadian railway companies should be given an opportunity to lay a scheme before the Board for its consideration, after negotiating with companies operating in the U.S., and for that purpose the Board will defer further consideration of this complaint for a period of 90 days."

It was clear that no attempt at harmonizing the rates would be satisfactory under two classifications, namely, the "official" from Port Huron, Detroit and Buffalo, as in effect throughout the northern states east of Chicago and the Mississippi, and the Canadian classification from Sarnia, Detroit, and Fort Erie, as in effect throughout the Dominion; one or the other would have to be adopted; and rather than change the classification throughout the Dominion it was obvious that the U.S. companies might reasonably be asked to adopt the Canadian classification for international shipments coming into Canada, for only a small proportion of their entire traffic would be affected; and particularly as in the reverse direction the Canadian companies apply the official classification on international shipments from Canada to the U.S. The tariff bases also, and not the classifications alone, are different on the two sides of the frontier. The Canadian tariffs are built up on the 5th class; the 4th class being 25%; 3rd, 50%; 2nd, 75%; and the 1st class, 100% higher than the 5th. There appears to be no such established basis in Central Freight Association territory. From Detroit the present proportions are as follows, the figures given being per cent.:

	1	2	3	4	5	6	
To Toronto	260	210	130	60	30	—	per cent.
To Montreal	200	159	105	41	20	—	"

Officials of Canadian railway companies, representing the Canadian Freight Association, met those of the interested U.S. companies, representing the Central Freight Association of Chicago, at a number of conferences, with the result that the U.S. companies consented to adopt the Canadian classification and the Canadian tariff basis for their international traffic; and within the time allowed by the Board, the Canadian Freight Association submitted a scheme of rates which it hoped would be acceptable to all parties. This scheme comprised over 80 foolscap pages of printed tables.

An examination of the percentage tariff bases given above will show that if the rates from U.S. points were to be scaled up from 5th class as is done in Canada, a great reduction in the international joint rates would result. Thus, Detroit to Toronto instead of running from 5th, 13c., to 1st, 36c., as at present, would run from 13c. to 26c.; from Detroit to Montreal it would be from 23½c. 5th, to 47c. 1st, instead of from 23½ to 58½c. as now; and similarly with all points in the U.S. west to the Mississippi; and this would be an impossible adjustment from the standpoint of the U.S. railways. The alternative was to accept the present 1st class rates and scale down; and so far as Port Huron, Detroit and Buffalo are concerned this is what has finally been done. With the rates from the western states we need not be so much concerned, provided, the commodity rates on raw materials are not interfered with. That a re-arrangement of the rates from Port Huron, Detroit, and Buffalo, even on the current 1st class basis, would carry with it a corresponding re-arrangement from western points is evident from a comparison of the Canadian percentage scale with those in the U.S., the Canadian scale producing higher rates in the lower classes; so that in order to avoid infringement of their own interstate commerce law by having higher rates from Detroit, etc., the U.S. companies would have to go farther back and practically re-arrange their entire international tariffs. To Montreal the present and proposed rates from Detroit, scaling, as explained above, on the 1st class, and dropping the fractions, are as follows:

	1	2	3	4	5	6
Present	58½	50½	39	27½	23½	19½
Proposed	58	51	44	36	29	27

	7	8	9	10
Present	Official Classification			
Proposed	26	24	—	21

This was the Detroit-Montreal schedule suggested in the scheme submitted to the Board. To Toronto, however, the companies proposed, in addition to the advance in the lower classes resulting from scaling on the existing 1st class on the Canadian basis, an advance in the 1st class rate itself; thus:

	1	2	3	4	5	6	7	8	9	10
Present	36	31	23	16	13	10	Official Classific'n			
Proposed	42	37	32	26	21	19	18	17	—	15

This would practically have meant a double advance and pointed to an effort to keep up the Canadian rates from Windsor (and, of course, from intermediate points such as Chatham and London) even beyond the advanced basis which would naturally follow from the substitution of the Canadian classification and scaling for the official.

The companies' draft scheme of the proposed revision of rates was presented to the Board by representatives of the G.T.R., C.P.R., and Michigan Central Rd. companies at a hearing in Montreal on Nov. 8, 1906, and it was then arranged that the scheme should be examined by J. R. Marlow, Manager of the Manufacturers' Association's Transportation Department, and by the Chief Traffic Officer of the Board, and that later those two officers should arrange an informal meeting with the advisory committee of the companies for the purpose of comparing notes, and enabling the companies to complete their scheme should the basis have proved satisfactory. This meeting was held in Montreal Dec. 19, 1906, and the result was reported by me on Dec. 21, in report 2. To quote from the secretary's minutes of the meeting, attached to the file, "Mr. Marlow considered the basis as a whole unsatisfactory," and it was finally agreed that new trial tables should be prepared on the basis of 54 instead of 58c., 1st class, Detroit to Montreal, and 36 instead of 42c., Detroit to Toronto; and I explained to the railway people that I could not recommend any advance in the rates from the U.S. frontier points beyond what would follow from the Canadian scaling on the present 1st class rates.

As a result of this meeting a new set of tables was prepared by the companies, and on Jan. 18 last I attended a meeting in Montreal to have these gone into and explained to me, and on Jan. 24 they were officially submitted under cover of the G.T.R. Freight Traffic Manager's letter of that date. In that letter he stated that the committee had endeavored to evolve a plan which would conform to my recommendation that whatever scheme of adjustment was finally adopted should take care of the Toronto Board of Trade complaint, as well as that of the manufacturers. He also pointed out that the elaboration of the bases suggested at the Montreal conference Dec. 19, 1906, had proved the impossibility of their voluntary adoption by the companies. To quote from his letter; even assuming that only 10% of the total tonnage would be affected by the revision, "the results would be so disastrous, and as explained to you at our conference by the C.P.R. Fourth Vice-President and myself, and confirmed to you for the G.T.R., by its Second Vice-President and General Manager, neither the officers of the G.T. nor C.P. Railways feel that they can assume the responsibility for the loss of such a large amount of net revenue; hence cannot agree to make the reduction which would follow the adoption of your suggested figures. At the same time they fully recognize the authority of the Board's orders, but in that case, the Board, of course, assumes the responsibility of the results."

The tables submitted included four mileage scales, as follows:

Scale A, based on 38c., Windsor to Toronto; 56c. to Montreal, 1st class.

Scale B, based on 36c., Windsor to Toronto; 54c. to Montreal, 1st class.

Scale C, based on 36c., Windsor to Toronto; 52c. to Montreal, 1st class.

Scale D, based on 38c., Windsor to Toronto; 54c. to Montreal, 1st class.

Elaborate statements were submitted to show the estimated effect that the suggested reductions would have on the G.T.R. Co.'s revenues; thus: Assuming that only 10% of the company's tonnage would be affected, class 1, 5%; class 2, 5%; class 3, 20%; class 4, 20%; class 5, 50%, the company would annually lose under scale D $535,349.00; under scale C, $782,876.00. If 15% were affected, $879,270.00 under scale D; $1,229,289 under scale C. If 20% were affected, $1,223,189.00 under scale D; $1,695,700.00 under scale C. Assuming that the reduction on classes would be class 1, 2%; class 2, 3%; class 3, 15%; class 4, 20%; class 5, 60%, the annual loss would be: If 10% of the total tonnage were affected, $496,463.00 under scale D; $707,913.00 under scale C. If 15% were affected, $830,068.00 under scale D; $1,159,945.00 under scale C. If 20% affected, $1,154,672.00 under scale D; $1,599,972.00 under scale C. The companies estimated that the C.P.R. Co's loss would equal about two-thirds that of the G.T.R.

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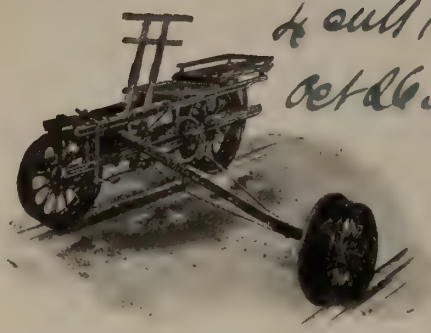

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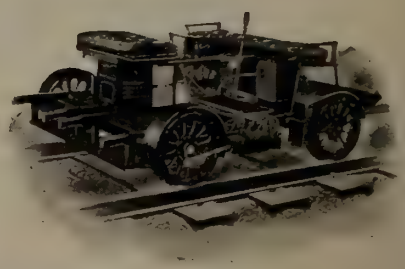

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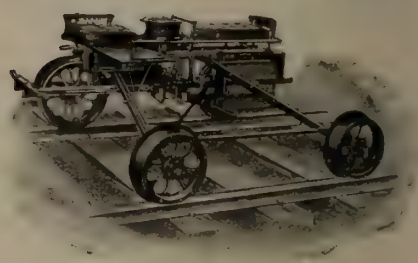

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Although it was conceded that these figures merely represented approximations (there had been no time for an audit) it was felt that in justice to the railway companies the Board could not ignore these statistics; but it was also manifest that the verification of the results by an expert investigation of the company's books would consume so much time that the Board's decision would have to be indefinitely postponed. It was, therefore, considered that progress should be reported, and a frank exposition placed before the transportation committees of the Manufacturers' Association and the Toronto Board of Trade, and this I did on March 18 and 19 last, under instructions from the Board. The committees appreciated the difficulties encountered and were indisposed to be unfair to the railway companies; they took a reasonable view of the situation, and rather than advise the accounting and its inevitable delays, they decided to accept tentatively any adjustment which the Board might decide upon, with the hope that it would recommend itself as a permanency.

Other tables were then drawn up by the companies, having for their object the satisfactory solution of the two cases combined, with a minimum loss to the companies. The principal difficulty was to evolve a mileage scheme which would be reasonably graded as to distances and rates, and which would, at the same time, produce a maximum rate of 36c. 1st class from Windsor to Toronto, and 58c. from Windsor to Montreal. Mileage scale K had been reached when I advised the companies' advisory committee that, in my opinion, the attempt to adjust all the rates—not the local rates west of Toronto alone, but the through rates from points west of Toronto to points east—on a strict mileage basis was impracticable; and I recommended to the committee that the mileage rates be confined to the local tariffs, and that the grouping system, which has always governed what may be regarded as the through rates from points west of Toronto to points east, should be continued, but modified; the said group rates not to exceed the mileage basis adopted for the local rates. This idea has been adopted, and alternative mileage scales L and M were next submitted. Scale L successfully gave the Buffalo 1st class rate of 30c., Fort Erie to Toronto, the Detroit 1st class rate of 36c. from Windsor to Toronto, and the Detroit 1st class rate of 58c. from Windsor to Montreal; but the mileage blocks were irregular and unsatisfactory. Scale M showed better mileage groupings, but gave a 38c. rate for the Windsor-Toronto distance; the companies suggesting that Toronto itself might be covered by a competitive tariff on the 36c. basis; in other words, the neighboring intermediate stations in the Toronto group would be held up to 38c. Further than this, many of the discrepancies between the Toronto and Hamilton tariffs which the Toronto Board of Trade had complained of (Hamilton having been given the Toronto rates to points north of Beeton and Allandale by the old Hamilton and North-Western Ry. Co.) would have been removed by advancing the Hamilton rates. As these defects seemed to me to foreshadow difficulties, I undertook myself the preparation of scale N (the last), which I do not intend to say is perfect—the necessity for keeping to the Detroit rates from Windsor to Toronto and Montreal making an ideal tariff impossible; but I do consider that it is an improvement in the mileage groupings; the grading being less objectionable than in scales L and M. It gives the proper rates from Windsor to Toronto and Montreal; the rate aimed at by the companies, namely 50c. 1st class, Windsor to North Bay; and reasonable mileage arbitraries to Sherbrooke, Quebec, and other points east and south of Montreal. One defect is that instead of giving the full Buffalo rate of 30c. from Fort Erie to Toronto, it gives 28c.; but this is unavoidable, and is on the safe side, being the lower. In the absence of the members of the advisory committee, I left a copy of this scale with the committee's rate clerk in Montreal, on June 19, 1906; but although they were again in the city by the end of the week, I have not heard from them.

In appendix A to this report, I have placed the three scales L, M, and N, side by side, showing in each the mileage groups and the 1st class rates; also the lengths of the various groups. Appendix B shows the rates from Toronto and Hamilton to about 40 of the principal points north and west of Toronto; appendix C the rates to the same points from London and Windsor; as they are at present in the column headed "now" and as they would be under scale L, M, or N. The figures designated by an asterisk indicate advances; under scale N there are none. The reductions in the 1st class rates under scale N run from 2 to 8c. per 100 lbs.; and, of course, the lower classes will be scaled as usual, 5th class being 50% of 1st class. Although I have limited the exhibits to Toronto, Hamilton, London, and Windsor, as sufficient for my purpose, it will be understood that the same scale will be used in revising the tariffs at the other common and distributing points; for example, Guelph, Galt, Brantford, St. Catharines, Chatham, etc. It is also understood that the scale will be departed from in those cases where the longer route has to make reductions to meet the shorter, without necessarily reducing the intermediate rates; in other words, mileage equalizations may be made by reducing the scale rates under the authority of sec. 315, sub-sec. 5, and sec. 329 of the Railway Act.

Coming now to the east bound group rates, the scheme proposes the continuation, with some changes necessitated by mileage, of the existing groups in the territory between the G.T.R. Toronto-Point Edward main line and Lake Erie; except that in consequence of the controlling rates from Buffalo, and the changed conditions along the Welland Canal, the entire section between the Canal and the Niagara River is to be incorporated in the lower Merritton-Grimsby group. From this territory the present and proposed 1st class rates to Montreal are as follows:

FROM	Present Winter	Present Summer	Proposed Winter & Sum'r
Windsor, Chatham, Newbury, Petrolia, Sarnia, etc	70	60	58 (Detroit rate)
Strathroy	68	60	56
Glencoe, Komoka, Park Hill,	68	68	56
London, St. Thomas, St. Mary's	66	55	54
Woodstock, Ingersoll, Tillsonburg, Stratford, Simcoe	64	56	52
Berlin, Galt, Paris, Brantford	60	50	50
Guelph	58	50	48
Welland	60	44	48
St. Catharines, Merritton, Grimsby	58	44	48
Hamilton, Dundas, Oakville, Port Credit, Brampton	54	42	46, with 42 summer from Hamilton.
Toronto	50	40	W. 44 S. 40

North of the G.T.R. Toronto-Point Edward main line the territory will be similarly grouped on the basis of the mileage scale, but with the rates for equal distances from the southern territory, as described above, as minima. The following are a few of the present and proposed 1st class rates to Montreal, viz.:

FROM	Present Winter	Present Summer	Proposed Winter & Sum'r
Goderich	68	60	56
Kincardine, Southampton	70	60	58
Owen Sound	70	60	56
Collingwood	68	60	56
Mount Forest, Harriston, Palmerston	68	60	52
Fergus, Elora	60	50	50
Orangeville	64	64	48
Barrie	64	50	52

It is necessary to bear in mind in making these comparisons that in the past summer rates (they apply only to points east of and including Peterboro and Trenton) have been conceded from only comparatively few of the shipping points west of Toronto—competitive points mostly; by far the greater number have never had lower rates in summer than in winter. It is understood that the companies will continue, if necessary, to meet the competition of the lake lines at actual competitive water points, even if lower than the proposed rates of the groups to which such points belong; but these competitive rates, which are authorized by the Railway Act, will probably be confined at such points as St. Catharines, Merritton, Welland, Windsor, etc., to commodity rates. The companies consider that they should be permitted to do the same at Toronto; but I am strongly in favor of continuing also the summer class rates from Toronto on the basis of 40c. 1st class, and have so advised the railway people; and I think the same principle should prevail at Hamilton—both these points being large shippers of general merchandise, while the other water points are not. I am strengthened in this opinion by the fact that although the winter rates from Toronto to Montreal will be reduced to the west bound basis, as contended for by the Board of Trade, the east bound summer rates will still be higher than the west bound by 4c. per 100 lbs. on 1st class freight—40c. east bound, as against 36c. west bound.

Some explanation is necessary with regard to the Buffalo rates which have not been made the maxima from the Canadian side, as the Detroit rates have from Windsor, and the Port Huron rates from Sarnia. The 1st class rate from Buffalo to Montreal is 44c., the suggested rate from Fort Erie and intermediate points in the same group is 48c.—4c. higher than Buffalo. To apply the Buffalo rates from Fort Erie and Suspension Bridge would, however, destroy the whole structure; for the Buffalo rate is the proposed winter rate from Toronto; consequently if the Buffalo rate were applied from Canadian frontier points, Hamilton and Toronto could not be higher—to preserve the scheme of grouping they would have to be lower. But if the winter rate Toronto to Montreal were made less than 44c., the west bound rates from Montreal would undoubtedly be reduced to the same level, and so further difficulties would be created. It seemed, therefore, to be reasonable, under the circumstances, to advance the Buffalo rates on paper to 48c. 1st class, to be followed by a competitive tariff on its present basis, namely 44c. The alternative is for the New York Central Rd. to advance its Buffalo-Montreal rates to the 48c. basis, and thus make the suggested competitive tariff unnecessary; but it is doubtful if the N.Y.C.R. will do this, as it would interfere seriously with its rates from such points as Dunkirk and Erie on the lake shore. Efforts were made to avoid this discrepancy at the Niagara frontier, but unsuccessfully. I do not consider the discrimination a serious one, especially as its removal would create more serious difficulties elsewhere. The territory between Toronto and Montreal has been regrouped so as to secure reasonable gradation of mileages and rates. The following are

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examples of present and proposed 1st class rates from Windsor, viz.:

To	Present	Proposed
Whitby, Oshawa	44c.	40c.
Bowmanville, Newcastle	46c.	40c.
Port Hope, Cobourg	46c.	42c.
Trenton, Belleville	48c.	44c.
Napanee	54c.	46c.
Kingston	54c.	48c.
Brockville	60c.	50c.
Prescott	60c.	52c.
Cornwall	66c.	54c.
Montreal	70c.	58c.

From stations east of Toronto—from what is known as the Midland Division—to Montreal, etc., the straight mileage scale will apply. To points west and east of Hull, and east and south of Montreal, I propose the following groups and rate bases, in which the companies concur, namely:

To—	Proposed Bases	Present Bases
Aylmer	4c. over Hull	6c.
Gatineau to Buckingham, inclusive	6c. " "	6 to 10c.
East of Buckingham Jct., to and including St. Augustine and St. Eustache	8c. " Montreal	10c.
Ste. Therese Jct. to Ste. Rose, inclusive	4c. " "	10c.
St. Vincent de Paul to Joliette Jct., inclusive	4c. " "	6 to 10c.
Lanoraie to Three Rivers, including Berthier	8c. " "	10 to 12c.
East of Three Rivers to Quebec, inclusive	10c. " "	14c.
East and south of Montreal to and including St. Rosalie, St. John's, St. Isidore, Howick Jct., and Cecile Jct.	4c. " "	6 to 10c.
Doucet's Landing, Victoriaville, Dixville, and east of St. Rosalie; also south of points named in preceding group (C.P.R. group to correspond)	8c. " "	10 to 16c.
East of Victoriaville to Point Levis	10c. " "	14c.

I have endeavored to give a general outline of the underlying principles of the proposed scheme and of the reductions which it is expected to produce, but in making up the tariffs it may be found that some slight changes may have to be made here and there. My recommendations are as follows:

(a) That the special local class tariffs of the Grand Trunk, Canadian Pacific, Michigan Central, Pere Marquette, Wabash, Toronto, Hamilton and Buffalo, and Canadian Northern Ontario railway companies, east of Lake Huron and Sudbury, and south of the Ottawa River, be revised so as to place them all on the same mileage scale; and for this purpose the table of mileage rates lettered N, and shown in appendix A to this report, be adopted as the basis by the said companies, subject to such reductions from the said mileage table between common or competitive points, as may be considered necessary under the authority contained in sec. 315, sub-sec. 5, and sec. 329 of the Railway Act; the rates in all cases to be based on the shortest practicable mileage.

(b) That, subject to clause d, for the purpose of compiling through special winter and autumn class freight tariffs from points west of Toronto to points east thereof, the territory south of and including the G.T.R. main line, Toronto to Point Edward, via Stratford, be divided into groups on the principle now existing, but modified by the mileage table referred to in clause a, all points on the Welland Canal to be included in the Fort Erie-Stoney Creek group, and the rates to Montreal 1st class to be as outlined in the memorandum of the Toronto conference of May 23, 1907, as follows:

From—	
Windsor, Amherstburg, Courtright, Sarnia, Newbury, Alvinston, and Forest	58c
From intermediate points east to and including Hyde Park	56c.
London, St. Thomas, St. Mary's, Thamesford, Port Burwell, and Port Rowan	54c.
Woodstock, Ingersoll, Stratford, Waterford, and Port Dover	52c.
Berlin, Galt, Brantford	50c.
Guelph	48c.
Fort Erie, Suspension Bridge, Port Colborne, Welland, St. Catharines, Grimsby	48c.
Hamilton, Dundas, Oakville, and Georgetown	46c.
Toronto	44c.

(c) That the territory north of that covered by clause b and west of and including the G.T.R. line between Toronto and Barrie be similarly grouped and the rate table referred to in clause a applied, but with the rates for equal distances in the territory covered by clause b as minima.

(d) That from points competitive with the lake and river lines the companies may publish from and to such competitive points, during the season of navigation, such commodity rates as may be necessary to meet the competition of the water carriers, and shall also publish from Toronto and Hamilton to Ottawa and Montreal, and intermediate points, competitive class tariffs on the basis now existing, but not to exceed the mileage rates referred to in clause a.

(e) That the through rates from the aforesaid groups be reasonably graduated to points east of Toronto on the basis outlined for the G.T.R. main line at the Toronto conference of May 23, 1907; with corresponding scaling along the C.P.R. line.

(f) That the east bound rates from the territory east of Toronto and Orillia, and east of and including Depot Harbor, Parry Sound, and North Bay, be in accordance with the mileage table referred to in clause a, having regard to the adjoining group rates under clause c.

(g) That to points in Quebec, west and east of Hull, and east and south of Montreal, on the G.T.R. and C.P.R. lines, the through rates from the grouped territory as defined in clauses b and c, be arrived at in accordance with the scale shown on page 11 of this report.

(h) That the companies and their U.S. connections be permitted to substitute the Canadian Freight Classification for the official classification from Detroit and Port Huron and from points west thereof via the Detroit and St. Clair River crossings; and to scale the lower classes on the 1st class rates now current. The Canadian Classification to be substituted for the official from Central Freight Association points via the Niagara frontier. (Re Buffalo proper, see footnote).

(j) That the rates from Canadian points on the Detroit and St. Clair river frontier to all points east to the Atlantic and north to the Ottawa River, shall in no case exceed the rates from Detroit and Port Huron as fixed by clause h.

(k) That in the adjustment of the international rates referred to in clause h, the rates on raw materials from points in the U.S. to points in Canada shall not be advanced at the instance, direct or indirect, of the companies operating in Canada, by reason of the changes in the rate basis herein permitted or prescribed.

(l) That no change shall be made in the west bound rates from Montreal to the grouped territory west of and including Toronto and intermediate points, as a consequence of this order of the Board.

NOTE, referred to in clause h.—In clause b, with respect to the rates from Fort Erie, etc., I have made no reference to the proposed re-adjustment of the Buffalo rates to Montreal, which is referred to in my report. The raising of the Buffalo rates on paper to the 48c. basis, and the substitution of the present 44c. basis by competitive tariff, would simply be a means to an end; and having regard to the explanation I have given I am of the opinion that a departure from the long and short haul clause might reasonably be authorized by the Board in this case.

The Chief Traffic Officer submitted the following supplementary report on July 5:

The Board accorded an informal hearing to-day to the Advisory Committee of the Canadian Freight Association, who desired to express their objections to the proposed mileage scale N, which I left with the committee's rate clerk in Montreal on June 19. That scale, as explained in my report, was intended to overcome the proposed competitive tariff between Windsor and Toronto, and the advance in the Hamilton rates to points north of Beeton Jct., and Allandale. The working of this scale, however, obviously reduced the committee's scale M rates for mileages other than those affected by the Toronto and Hamilton rates, to the extent that the rates for distances over 100 miles would be so reduced as virtually to give a scale lower than D, which was the one the companies objected to at the outset, and which their statements submitted were intended to prove would result in so great a loss of revenue. Recognizing the force of these objections, I have arranged with the advisory committee to make the 36c. basis Windsor to Toronto the maximum to intermediate points, so as to avoid the necessity for a separate competitive tariff to Toronto proper; also to avoid any increases which scale M would make from Hamilton to points north of Beeton and Allandale, by repeating the present rates where these are lower than scale M. With these modifications I am prepared tentatively to recommend the adoption of the committee's scale M, and for clause a of the recommendations in my report to substitute the following, viz:

(a) That the special local class tariffs (known as "town tariffs") of the Grand Trunk, Canadian Pacific, Michigan Central,

APPENDIX "A"

Group length Miles.	Scale L. Distance groups Miles. To 5 8	Rate Cents.	Group length Miles.	Scale M. Distance groups Miles. To 5 8	Rate Cents.	Group length Miles.	Scale N. Distance groups Miles. To 5 8	Rate Cents.
5	6 " 10	10	5	6 " 10	10	5	6 " 10	10
5	11 " 15	12	5	11 " 15	12	5	11 " 15	12
5	16 " 20	14	5	16 " 20	14	5	16 " 20	14
10	21 " 30	16	10	21 " 30	16	10	21 " 30	16
10	31 " 40	18	10	31 " 40	18	10	31 " 40	18
10	41 " 50	20	10	41 " 50	20	10	41 " 50	20
10	51 " 60	22	10	51 " 60	22	15	51 " 65	22
10	61 " 70	24	10	61 " 70	24	15	66 " 80	24
10	71 " 80	26	10	71 " 80	26	20	81 " 100	26
20	81 " 100	28	15	81 " 95	28	25	101 " 125	28
20	101 " 120	30	15	96 " 110	30	25	126 " 150	30
35	121 " 155	32	30	111 " 140	32	25	151 " 175	32
35	156 " 190	34	30	141 " 170	34	25	176 " 200	34
35	191 " 225	36	30	171 " 200	36	25	201 " 225	36
30	226 " 255	38	30	201 " 230	38	25	226 " 250	38
30	256 " 285	40	30	231 " 260	40	30	251 " 280	40
30	286 " 315	42	30	261 " 290	42	30	286 " 310	42
30	316 " 345	44	30	291 " 320	44	30	311 " 340	44
30	346 " 375	46	30	321 " 350	46	30	341 " 370	46
30	376 " 405	48	30	351 " 380	48	30	371 " 400	48
30	406 " 435	50	30	381 " 410	50	35	401 " 435	50
			30	411 " 440	52	35	436 " 470	52
			30	441 " 480	54	35	471 " 505	54
			40	481 " 520	56	35	506 " 540	56
			40	521 " 560	58	35	541 " 575	58

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APPENDIX "B"

Comparison between Present and Proposed First-Class Rates from Toronto and Hamilton.

FROM TORONTO					TO	FROM HAMILTON				
Miles	Now	L	M	N		Miles	Now	L	M	N
30	18	16	16	16	Georgetown	33	20	18	18	18
39	22	18	18	18	Hamilton	—	—	—	—	—
40	22	18	18	18	Tottenham	62	24	24	24	22
43	24	20	20	20	Beeton	67	26	24	24	24
49	24	20	20	20	Guelph	40	24	18	18	18
54	24	22	22	22	Harrisburg	20	14	14	14	14
58	24	22	22	22	Galt	31	18	18	18	18
60	28	22	22	22	Brantford	25	16	16	16	16
63	22	*24	*24	22	Berlin	52	24	22	22	22
63	26	24	24	22	Elora	60	24	22	22	22
63	26	24	24	22	Allandale	92	26	*28	*28	26
64	26	24	24	22	Harris	29	18	16	16	18
64	26	24	24	22	Barrie	93	26	*28	*28	26
66	26	24	24	24	Fergus	62	26	24	24	22
83	30	28	28	26	Woodstock	48	22	20	20	20
86	30	28	28	26	Orillia	115	30	30	*32	28
87	30	28	28	26	Mount Forest	101	32	30	30	28
89	30	28	28	26	Stratford	61	24	24	24	22
92	30	28	28	26	Palmerston	89	30	28	28	26
92	32	28	28	26	Ingersoll	58	24	22	22	22
95	30	28	28	26	Harriston	95	32	28	28	26
95	32	28	28	26	Collingwood	108	32	30	30	28
99	32	28	30	26	St. Mary's	71	26	26	26	24
101	32	30	30	28	Listowel	90	30	28	28	26
102	34	30	30	28	Penetang	130	34	32	32	30
111	36	30	32	28	London	77	30	26	26	24
112	34	30	32	28	Gravenhurst	140	34	32	32	30
116	34	30	32	28	Meaford	130	34	32	32	30
119	34	30	32	28	Walkerton	116	34	30	32	28
119	36	30	32	28	Midland	148	38	32	34	30
119	36	30	32	28	St. Thomas	85	30	26	26	24
120	34	30	32	28	Wingham	119	34	30	32	28
122	34	32	32	28	Owen Sound	160	34	34	34	32
122	36	32	32	28	Clinton	94	32	28	28	26
134	36	32	32	30	Goderich	106	34	30	30	28
151	38	32	34	32	Southampton	148	38	32	34	30
159	38	34	34	32	Kincardine	147	38	32	34	30
162	34	34	34	32	Wiarton	158	34	34	34	32
176	38	34	36	34	Chatham	141	36	32	34	30
221	40	36	36	36	Windsor	187	38	34	36	34
227	46	38	38	38	North Bay	256	46	40	40	40

Figures shown by * are increases over present rates.

APPENDIX "C"

Comparison between Present and Proposed First-Class Rates from Windsor and London.

FROM WINDSOR					TO	FROM LONDON				
Miles	Now	L	M	N		Miles	Now	L	M	N
46	24	20	20	20	Chatham	65	26	24	24	22
108	30	30	30	28	St. Thomas	15	12	12	12	12
110	30	30	30	28	London	—	—	—	—	—
130	36	32	32	30	Ingersoll	20	14	14	14	14
133	34	32	32	30	St. Mary's	23	16	16	16	16
139	36	32	32	30	Woodstock	27	16	16	16	16
143	36	32	34	30	Stratford	33	20	18	18	18
158	36	34	34	32	Paris	48	22	20	20	20
160	38	34	34	32	Clinton	51	22	22	22	22
165	36	34	34	32	Brantford	56	26	22	22	22
168	38	34	34	32	Harrisburg	58	24	22	22	22
169	38	34	34	32	Berlin	59	24	22	22	22
172	38	34	36	32	Goderich	62	26	24	24	22
172	40	34	36	32	Listowel	62	24	24	24	22
179	38	34	36	34	Galt	58	24	22	22	22
181	42	34	36	34	Palmerston	71	26	26	26	24
183	38	34	36	34	Guelph	73	30	26	26	24
185	42	34	36	34	Wingham	75	28	26	26	24
187	38	34	36	34	Hamilton	77	30	26	26	24
187	42	34	36	34	Harriston	76	28	26	26	24
192	42	36	36	34	Mount Forest	82	28	28	28	26
196	42	36	36	34	Elora	86	30	28	28	26
199	42	36	36	34	Fergus	88	30	28	28	26
202	40	36	38	36	Georgetown	92	30	28	28	26
208	44	36	38	36	Walkerton	98	32	28	30	26
213	42	36	38	36	Kincardine	103	34	30	30	28
232	46	38	40	38	Tottenham	122	36	32	32	28
—	—	—	—	—	Windsor	110	30	30	30	28
236	46	38	40	38	Beeton	126	36	32	32	30
240	46	38	40	38	Southampton	130	36	32	32	30
250	46	38	40	38	Wiarton	140	36	32	32	30
252	50	38	40	40	Owen Sound	142	36	32	34	30
261	50	40	42	40	Allandale	151	38	32	34	32
262	50	40	42	40	Barrie	152	38	32	34	32
278	50	40	42	40	Collingwood	168	38	34	34	32
284	50	40	42	42	Orillia	174	40	34	36	32
299	50	42	44	42	Meaford	189	40	34	36	34
300	50	42	44	42	Penetang	190	42	34	36	34
310	52	42	44	42	Gravenhurst	200	42	36	36	34
317	50	44	44	44	Midland	207	44	36	38	36
425	68	50	52	50	North Bay	315	52	42	44	44

Pere Marquette, Wabash, Toronto, Hamilton and Buffalo, and Canadian Northern Ontario Ry. companies, east of the Detroit and St. Clair rivers, Lake Huron, Georgian Bay, and North Bay, and south of the Ottawa River, be reduced so as to place them all on the same mileage scale; and that for this purpose the table of mileage rates lettered M, and shown in appendix A to this report, be adopted as the bases by the said companies, subject to such reductions from the said mileage table between common or competitive points as may be considered necessary under the authority contained in sec. 315, sub-sec. 5, and sec. 329 of the Railway Act, the rates in all cases to be based on the shortest workable mileage, subject also to Toronto rates on the basis of 36c. 1st class as the maxima from points on the Canadian side of the Detroit and St. Clair rivers to points intermediate to Toronto; and to the present rates as the maxima from Hamilton to points north of Beeton Jct., and Allandale.

I should add that the companies' scale M referred to above, was accepted by the Manager of the Transportation Department of the Canadian Manufacturers' Association as satisfactory to his Association; also, that in removing the discrimination between the distributing towns, which forms part of the complaint of the Toronto Board of Trade, general reductions have been made at such points as London, Brantford, Chatham, St. Catharines, etc., which were really not applied for.

The Nova Scotia Government has passed an Order-in-Council approving by-law 1, of the Canada Coal and Rd. Co., fixing a tariff of tolls to be charged for the conveyance of freight on the company's railway.

S. E. Dewey, Travelling Freight Agent, G.T.R., New York City, in remitting his annual subscription writes: "I appreciate your paper very much, as it keeps me fully conversant with Canadian railway events."

The C. P. R. passenger department has issued its initial folder descriptive of the points in the Muskoka country reached by its Toronto-Sudbury line, of which the section from the junction with the Toronto-Owen Sound line at Bolton, to Bala, was opened for passenger traffic June 22.

The Council of the Canadian Society of Civil Engineers has appointed M. J. Butler, Deputy Minister of Railways and Canals; F. P. Gutelius, Assistant Chief Engineer C.P.R.; H. Holgate, J. Kennedy, H. D. Lumsden, Chief Engineer National Transcontinental Ry.; W. McNab, Principal Assistant Engineer G.T.R.; D. McPherson, Assistant Chief Engineer National Transcontinental Ry., and G. Mountain, Chief Engineer, Board of Railway Commissioners, as a committee to consider problems in relation to railway maintenance and transportation.

August Birthdays.

Many happy returns of the day to—

H. H. Adams, Superintendent Canadian Division, Michigan Central Rd., St. Thomas, Ont., born at Detroit, Mich., Aug. 13, 1876.

W. E. Bishop, Manager Hamilton Steamboat Co., Hamilton, Ont., born at Brantford, Ont., Aug. 10, 1868.

J. F. Chapman, General Freight and Passenger Agent, Bay of Quinte Ry., Thousand Islands Ry., Oshawa Ry., and Deseronto Navigation Co., Deseronto, Ont., born at Frankford, Hastings Co., Ont., Aug. 25, 1863.

J. J. Connelly, Trainmaster G.T.R., Island Pond, Vt., born at Granby, Que., Aug. 13, 1873.

Barlow Cumberland, Vice-President Niagara Navigation Co., born at Portsmouth, Eng., Aug. 5, 1846.

Hon. W. Gibson, railway contractor, Beamsville, Ont., born at Peterhead, Scotland, Aug. 7, 1849.

G. H. Ham, head office staff C.P.R., Montreal, born at Trenton, Ont., Aug. 23, 1847.

W. P. Hinton, Assistant General Passenger and Ticket Agent G.T.R., Montreal, born at Hintonburg, Ont., Aug. 30, 1871.

R. Kerr, Passenger Traffic Manager C.P.R., Montreal, born at Toronto, Aug., 1845.

J. D. McDonald, District Passenger Agent G.T.R., Toronto, born there Aug. 27, 1855.

T. McHattie, Master Mechanic, G.T.R., Montreal, born Dufftown, Banffshire, Scotland, Aug. 8, 1854.

J. E. Matthews, soliciting passenger agent C.P.R., Charlottetown, P.E.I., born at Albany, P.E.I., Aug. 17, 1869.

C. Montgomery, Assistant Master Mechanic Pere Marquette Rd., St. Thomas, Ont., born near London, Ont., Aug 29, 1860.

W. E. Mullens, General Manager Costa Rica Rd., and Northern Rd. of Costa Rica, San Jose, born at Stratford, Ont., Aug. 13, 1870.

W. S. Nevins, City Freight Agent, C.P.R. and Minneapolis, St. Paul and Sault Ste. Marie Ry., Buffalo, N.Y., born at Towanda, Pa., Aug. 13, 1850.

W. M. Porteous, Freight Agent C.P.R., St. Louis, Mo., born at Edinburgh, Scotland, Aug. 3, 1857.

J. F. Richardson, Superintendent Eastern Division C.P.R. Telegraphs, Montreal, born at Granby, Que., Aug. 23, 1861.

W. LeB. Ross, Local Treasurer G. T. Pacific Ry., Winnipeg, born at Ottawa, Ont., Aug. 9, 1868.

C. R. Scoles, General Manager Atlantic and Lake Superior Ry., New Carlisle, Que., born at Grantham, Lincoln, Eng., Aug. 27, 1856.

W. Stitt, General Passenger Agent C.P.R. Eastern Lines, Montreal, born in Kirkcudbrightshire, Scotland, Aug. 3, 1855.

W. F. Taylor, General Storekeeper I.C.R., Moncton, N.B., born at Hillsboro, N.B., Aug. 20, 1855.

W. N. Warburton, General Manager Chatham, Wallaceburg and Lake Erie Ry., Chatham, Ont., born there Aug. 24, 1851.

W. B. Way, Trainmaster C.P.R., White River, Ont., born at Bowmanville, Ont., Aug. 22, 1867.

W. H. H. Willis, acting Canadian Freight Agent Pennsylvania Rd., Toronto, born at St. Michaels, Maryland, Aug. 22, 1872.

The Dominion Car and Foundry Co. is being proceeded against at Montreal, under the Alien Labor Act, for importing certain skilled employes from the U.S. The company states in defence that the manufacture of steel cars is an entirely new industry in Canada, and that it is impossible for it to obtain skilled help to do the work.

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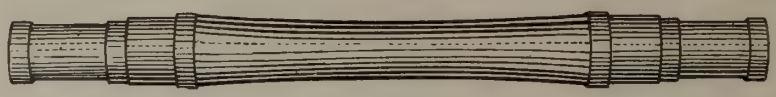
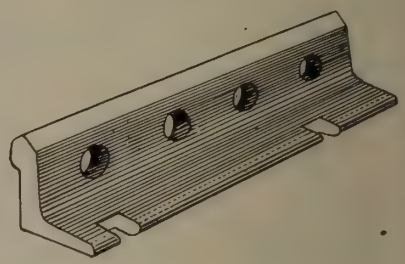


AXLES

CAR AND LOCOMOTIVE



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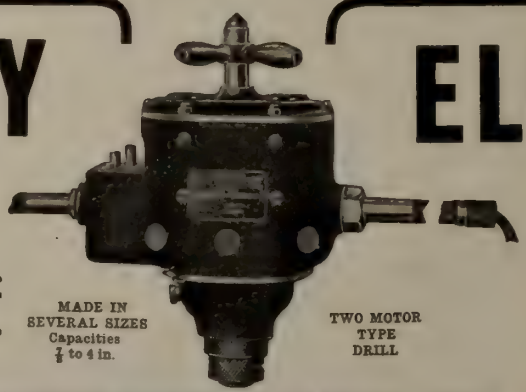

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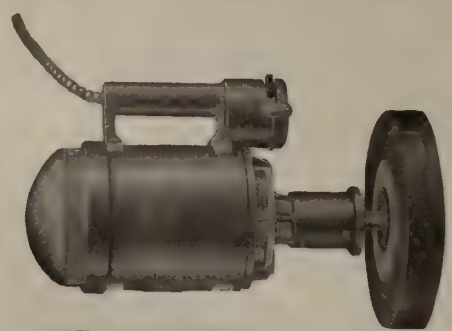

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Regulations re Locomotives, Fireguards, Etc.

The Board of Railway Commissioners passed the following order, No. 3245, July 4: In pursuance of the powers conferred upon it by the Railway Act, secs. 30 and 269, and of all other powers possessed by the Board in that behalf, the Board orders as follows:

Every railway company subject to the legislative authority of the Parliament of Canada operating any railway by steam power shall cause every locomotive used on the railway, or portion of railway operated by it, to be fitted and kept fitted with netting mesh as hereinafter mentioned, viz., on every engine equipped with an extension smoke-box, the mesh to be not larger than 2½ x 2½ per inch of no. 10 Birmingham wire gauge, and to be placed in the smoke-box so as to extend completely over the aperture through which the smoke ascends—the openings of the mesh not to exceed ¼ in. and 1-64 in. to the sq. in. On every engine equipped with a diamond stack the mesh to be not more than 3 x 3 per inch of no. 10 Birmingham wire gauge, and to be placed across the top of the stack so as completely to cover the same, the openings of the said mesh not to exceed 3-16 in., and 1-64 in. to the sq. in.

Every such company operating any railway by steam power shall cause the openings at the back of the ashpans on every locomotive used on the railway, or portion of railway operated by it, to be covered, when practicable, with heavy sheet iron dampers, or if not practicable, with screen netting dampers 2½ x 2½ per in. of no. 10 Birmingham wire gauge—such dampers to be fastened either by a heavy spring or a split cotter and pins; overflow pipes from the injectors to be put into the front and back part of the ashpans and used during the months of April, May, June, July, August, Sept., and Oct.

Every such company shall provide inspectors at terminals where its locomotives are housed and repaired, and cause them, in addition to the duties to which they may be assigned by the officials of the railway companies in charge of such terminals, to examine, at least once in every week, the nettings, dead plates, ashpans, dampers, slides, and any other fire protective appliance or appliances used on any and all engines running into the said terminals. To keep a record of every such inspection in a book to be furnished by the company for the purpose, showing the number of the engines inspected, the date of such inspection, and the condition of the said fire protective arrangements and appliances.

No employe of any such railway company shall do, or in any way cause, damage to the netting on the engine smoke stack, or to the netting in the front end of such engine; open the back dampers of the engine while running ahead; or otherwise do or cause damage or injury to any of the protective appliances used on the said engines.

Every such company allowing or permitting the violation of, or in any other respect contravening or failing to obey the foregoing regulations, shall be subject to a penalty of $25 for every such offence. Every such employe contravening or failing to obey the said regulations, or any of them, shall be subject to a penalty of $15 for every such offence.

No such company shall burn lignite coal on its locomotives as fuel for transportation purposes until such times as the Board shall otherwise order or direct. Lignite coal includes all varieties of coal, the properties of which are intermediate between wood and coal of the older formations. Every such railway company burning, or permitting to be burned, lignite coal on its locomotives in contravention of the regulation herein in this behalf, shall be subject to a penalty of $25 for each offence.

Every such company operating a railway by steam power in the provinces of Saskatchewan and Alberta, shall establish and maintain along the line of railway where the same passes through prairie country in the said provinces on each side of such line, and of not less than 300 ft. in width from the center of the railway, a good and sufficient fireguard, to be made by plowing the land to the extent of not less than 16 ft. in width on the side of the fireguard farthest from the railway, and by burning or otherwise freeing from inflammable materials the spaces between such plowing and such line of railway.

Every such company shall, at all times, keep such fireguards free from weeds and other inflammable material and in such condition as not to allow fire to spread thereon and therefrom through coals, cinders, or sparks falling from or emitted by engines upon its railway, provided, that no such company shall be bound to enter upon the lands of another for any of the purposes aforesaid without the consent of the owner of the said lands, unless such company can lawfully do so without being liable to make compensation therefor; provided, also, that the said company shall not be required to establish and maintain such fireguards where the nature of the country renders it impossible to do so, or where the doing so would involve serious loss and damage to property, all such places and portions of line or lines to be specifically described and reported to the Board.

The fireguards herein provided for to be completed on or before Sept. 1, 1907, and after this year, on or before the 1st day of Aug. in each year; and, in other respects, these regulations shall take effect and be operative on and from Sept. 1, 1907. These regulations shall not have effect during the months of Dec., Jan., Feb., or Mar., in any year.

Every such company disobeying or failing to comply with the provisions of these regulations shall be liable to a penalty of $100 for every such disobedience or failure to comply with the provisions of these regulations respecting fireguards.

Edmonton to Fort McMurray.—J. K. Cornwall returned to Edmonton, Alta., July 16, from a two months' trip along the route of a projected railway from Edmonton to Fort McMurray. He says there are no engineering difficulties to contend with, and that timber for ties and gravel for ballasting can be had at convenient distances and at readily accessible points along the entire route. The route projected is from Edmonton to Athabasca Landing, thence to Lac la Biche, and then to Fort McMurray.

Ottawa Union Station.—Plans were filed with the Department of Railways by the G.T.R., July 13, for the proposed union station at Ottawa. The plans contemplate a terminal station on the site of the present Central Station. The new building will be oblong in shape and will be surmounted by a large dome. The estimated cost is $250,000 The hotel, which is to be erected in connection with the union station, will be placed to the north, abutting the east bank of the canal and Rideau st. The building is planned in semi-Gothic style and will overlook Major's Hill Park and Sapper's bridge. A single track under an archway of the hotel leads out to the C.P.R. running over the Interprovincial bridge. A full description of the station appeared in our April issue.

During the ten months ended June 30, shipments of grain over the C.P.R. and the Canadian Northern Ry., totalled 56,169 cars against 54,098 in the corresponding period 1905-06. Of this total 49,957 cars were wheat.

Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.—Gross earnings for year ended June 30, $190,975, against $192,958 for same period 1905-06.

Atlantic and Lake Superior Ry.—By an order of the Court of Exchequer, June 24, unsecured creditors of the Baie des Chaleurs Ry. were given 30 days in which to file their accounts against the company.

Another decision of the Court of Exchequer confirms the agreement of sale of the line to the Atlantic, Quebec and Western Ry. Co. This decision clears up the legal fight which has been going on for the past 10 years between the shareholders, bondholders and creditors of the A. and L.S. Ry., and enables the A.Q. and W. Ry. to obtain a clear title to the Baie des Chaleurs Ry., which is the only portion of the lines proposed to be amalgamated as the A. and L.S. Ry., which was actually operated as such. The other lines which it was proposed to amalgamate were the Great Eastern Ry., and the Ottawa Valley Ry., neither of which are being operated.

Columbia and Western Ry.—F. A. Heinze has been examined by commission in New York in the suit brought by the C.P.R. against him to accept partition of the 500,000 acres of the British Columbia land grant to the Columbia and Western Ry. By the terms of the subsidy act the lands are exempt from taxation until 1911, provided there is no change in title. The suit is being tried in the British Columbia courts.

Dominion Atlantic Ry.—Gross earnings for June, $94,400, against $87,075, for June, 1906, making for six months ended June 30, $457,100 against $433,693 for corresponding period of 1906.

Joliette and Brandon Ry.—Application is being made to the Board of Railway Commissioners for an order recommending the sanction of a lease of the company's line to the C.P.R. for 94 years, from Jan. 1, 1906.

Mabou and Gulf Ry.—The property and assets of the Mabou Coal Mining Co. were offered for sale at the court house, Halifax, July 16, under an order for foreclosure and sale obtained by the bondholders. The sale was postponed on the objection of shareholders that it had not been advertised according to the order of the court. The collieries are situated in Inverness county, and the property and assets include a shipping pier and a railway from the collieries to the pier, having a length of about 4.50 miles. Some construction was also done on a line from the shipping pier to a junction with the Inverness Ry. and Coal Co.'s line, and surveys were made for a line to Orangedale on the Intercolonial Ry.; and for another from Hawkesbury to Port Malcolm, N.S. The Dominion Parliament in 1903 voted subsidies in aid of certain of these lines.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—It was officially announced at Montreal July 14, that the directors had decided to increase the capital to $42,000,000, of which one-third will be preferred stock and the remainder common. The outstanding issues are $7,000,000 preferred and $14,000,000 common stock. It is proposed to issue at present $4,000,000 of the new stock to present shareholders at par. The C.P.R. holds $3,533,400 preferred stock, and $7,066,600 common stock of the present issue, and $3,993,000 of the company's 4½% bonds. The object of the increase is to enable the company to make improvements which the increase of its business demands.

Pere Marquette Rd.—The reorganization will involve the creation of a new corporation chartered under Indiana laws, which will issue its securities in exchange for the outstanding securities of the present Michigan corporation. In addition to the proposed

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N. A. RHODES, Vice-President

CAPITAL, $1,000,000

J. M. CURRY, Sec.-Treas.

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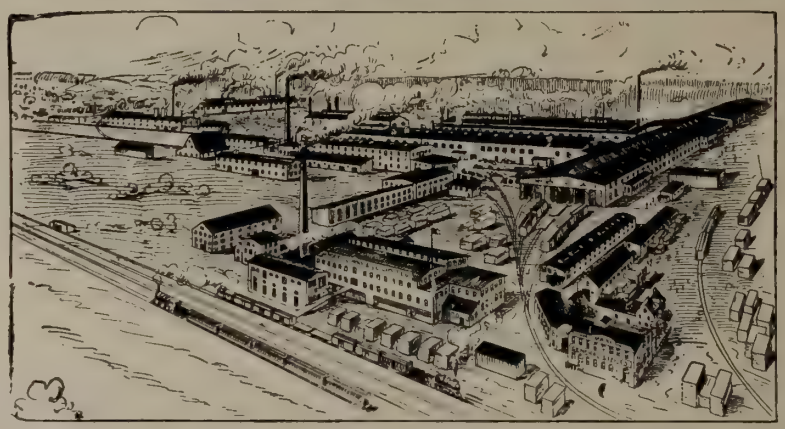

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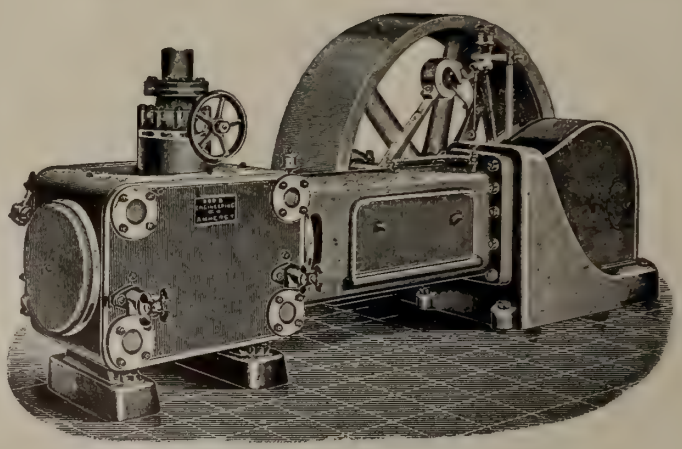

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arrangement with preferred shareholders, common stockholders will be given the right to subscribe to an issue of five-year 6% debentures to the extent of 20% of their present holdings, receiving an amount of new common stock equal at par to their holdings in the old company, and, as a bonus, an amount of new common stock equal to the face value of the debentures subscribed for. The following figures, which the receiver and various committees believe to be conservative, have been furnished by W. Cotter, General Manager, showing results for the fiscal year ended June 30, 1907: Gross earnings (June estimated), $14,000,000; net earnings, $4,045,000; taxes, rentals, and interest, $3,900,000; surplus, $145,000. The estimated gross earnings for the fiscal year ended June 30, 1908, are $14,500,000. Allowing for operating expenses at the same rate as during the current fiscal year, it is estimated that this should leave a balance after the payment of fixed charges sufficient to meet a dividend of 4% on the new preferred stock. The differences between the Cincinnati, Hamilton & Dayton and the Pere Marquette will be settled by arbitration with the ending of the receivership. The future board of directors will include important Michigan interests and representatives of the preferred stockholders.—Railway Age.

Quebec and Lake St. John Ry.—Gross receipts for April, $47,664 against $42,474 for April, 1906, making for four months ended April 30, $164,626, against $133,077 for same period, 1906.

Quebec Bridge and Ry. Co.—A special meeting of shareholders has been called to be held at Quebec, Aug. 5, for the purpose of sanctioning the following resolution: "Resolved, that the Governor-in-Council in pursuance of Chap. 35 of 6-7 Edward VII, entitled An Act to authorize a loan to the Quebec Bridge and Ry. Co., be requested to advance by way of loan to the company, $6,678,200, and that the bonds of the company now issued, pledged or hypothecated with the Bank of Montreal for advances for the purposes of the company, be redeemed from pledge or hypothecation with part of said loan, and that arrangements be made with the Bank of Montreal to have the said bonds deposited with the Minister of Finance and Receiver-General, as security for the loan to the company by the Governor-in-Council of the said sum of $6,678,200."

Quebec, Montreal and Southern Ry.—The purchase of this line by the Delaware and Hudson Co. has been completed according to an announcement made July 19 by Vice-President Sims. The Q. M. and S. Ry. includes the old Quebec Southern Ry., and the South Shore Ry., which had previously absorbed the East Richelieu Valley Ry., the Montreal and Sorel Ry., and United Counties Ry.

Shuswap and Okanagan Ry.—Net earnings for three months ended Mar. 31, $7,749, against $6,130 for same period 1906. Net earnings for nine months ended Mar. 31, $23,800, against $20,609 for same period 1905-06.

Toronto, Hamilton and Buffalo Ry.—Estimated earnings for June, $78,329.77, against actual earnings of $65,296.64 for June, 1906.

Wellington, Grey and Bruce Ry.—The estimated earnings for the half-year ended June 30 applicable to meet interest on the bonds, will admit of the payment of £2 13s. 1d. per £100 bond, payable as to £1 6s. 3d. in final discharge of coupon no. 49, due Jan., 1895, and £1 6s. 10d. on account of coupon due July 1, 1895. A year ago £2 8s. 6d. per bond was paid.

White Pass and Yukon Ry.—Gross earnings for five months ended June 30, $486,342.

Master Mechanics' Convention.

In reviewing the proceedings at the 40th annual convention of the Association of American Master Mechanics held recently at Atlantic City, N.J., the Railroad Gazette says: "Other examples of improved practice appeared, which may be made the subject of investigation in the future, while still others are coming to be accepted as a standard of good if not of common usage. The superheater stands pre-eminent as an example of the latter. The story of the successful introduction of this device on the C.P.R. is of more than passing interest, resting on belief in the theoretical accuracy of a system followed by forcing it to a successful consummation through almost insuperable mechanical difficulties. It is a finer story of persistence in the pursuit of an object than appears in the simple statements of the paper that was presented. And, to those who read between the lines, it has a significance far beyond the mere statement of the fact that the superheater can be applied to a locomotive and be made to show an economy of operation when considered as a whole. It shows a tendency on the part of at least one railway to take the initiative in the introduction of an improvement. Up to the present time it must be admitted by even the most ardent admirer of American railways that the great majority of the improvements that have been made have been introduced as the result of the persistent efforts of the supply man, and not because the railway official has been convinced of the scientific soundness of an improvement, and then has proceeded to make it a working practical success on his own initiative. Perhaps this experience on the C.P.R. will mark the opening of a new era in this respect."

This question of superheating was brought up at the closing session, when H. H. Vaughan, Assistant to the Vice-President C.P.R., presented the report of the committee of which he was chairman. The results of detailed observations as to the efficiency of locomotives with and without superheating apparatus on the C.P.R., as well as experiments conducted by other roads, show that superheating saves 10 to 15% of coal in freight service, and 15 to 20% in passenger service. There is also a marked saving in the water consumption. He said: Since writing the report I have come to the conclusion, from some facts we have learned about overheating of return bends, that the neglect of dampers has a good deal to do with the stopping up on the pipes. I do not believe the cinders will attach themselves to a cool return bend, and they do attach themselves very readily to a very hot one. * * * There is a drop of pressure of from 5 to 7 lbs. under ordinary working conditions in the steam passing through the superheater. That makes the sight-feed lubricator a better lubricator on a superheater than it is on a saturated steam engine. As a matter of fact, on account of our always having 7 lbs. or more difference between the boiler and steam chest in the superheater than in the ordinary simple engine, the sight-feed lubricator worked just that much better instead of worse, and there is less trouble with it than there is on the ordinary engine. * * * Superheating came to this country with no experience except the European practice, and what does for European practice will not always do for us. That may be illustrated by a thing we have had driven on to us, and that is, that whatever superheater you use you have to use one that can be fixed up in an hour or two, and the engine put back into business. * * * Several roads in the U.S. have tried a superheater that has given trouble, and they have said, to a certain extent, that the superheater would not do, that it gave too much trouble. Now, if the superheater can be properly handled it will not give too much trouble. I believe inside of another year's experience we can say definitely and reliably that you can equip your engines with superheaters, and if you will give them attention—not expense but attention—you can run without any more trouble than you have with the ordinary simple engine. I would like to emphasize the difference between attention and expense. If we are going to give up a device that will save from 10 to 20% on coal just because we cannot get roundhouse machinists and foremen to pay attention to things, we are going on the wrong track. It is a question of attention with your superheaters, and not of expense. We have the records from passenger service of the number of failures, and of these failures a large number came from the use of bronze nuts. There are only three failures that are serious in 198,000 miles. That shows definitely that you do not have enough engine failures with superheaters to condemn them. Our repair costs show that we do not have enough additional cost of repairs to condemn them. The road records show that they do make a satisfactory saving in coal. Therefore, I think this superheating is a thing that is worthy of careful attention and should be taken up properly. We frequently hear it stated that coal costs only $1.50 or so, and it is hardly worth while to superheat, almost always forgetting that coal which costs $1.50 originally may not cost that where it is burned. It costs money to haul coal to the place where it is burned. There are many roads showing coal at $1.50 on the performance sheets that are hauling it 300 and 400 miles before it is used. You cannot haul it much under one-half a cent per ton mile, and that runs up fast, and there are few roads that cannot afford to spend $800 or $1,000 on a new engine to save that. We have been using superheated steam in an ordinary engine of the regular design, but we have used rather smaller piston valves than most people. We use an 11-in. piston valve for a 21-in. cylinder, and we have since enlarged that cylinder to 22½ in., and still use the 11-in. valve, with results entirely satisfactory. I feel, though, that we have gone about as far as is necessary in putting an 11-in. valve on a 22½-in. cylinder. Of course, that is a considerably smaller valve than you would use in general practice with saturated steam. Forced lubrication I do not believe to be necessary at all. I think the sight-feed lubricator, as I said, works better on a superheated engine than on a saturated engine.

The committee was continued for another year.

At the opening session of the convention J. F. Deems, New York Central Lines, delivered an address, the important point emphasized being the necessity of raising the standard of man in the profession of railway master mechanic. The report of the Secretary showed two members transferred to the honorary roll, 10 deaths, 12 resignations, and six dropped during the year. There were 66 new members added, and two reinstatements, making a total of 876 members, divided as follows: 819 active members; 67 associate members, and 40 honorary members. The balance in the hands of the Treasurer was $2,739.

The committee on mechanical stokers presented a progress report, being followed by reports of the committee on shrinkage allowance for tires and locomotive lubrication. The apprentice system of the New York Central Lines, originally intended as a subject for topical discussion, was dealt with in a paper by C. W. Cross and W. B. Russell, and gave rise to a general and interesting discussion.

In the discussion of the Proper Spacing of Boiler Tubes, with which the second session

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commenced, H. H. Vaughan voiced the consensus of opinion in saying that the spacing was largely dependent on the character of the water, that 5/8 bridges were satisfactory and permitted a large extent of heating surface on a line which had good water, while on a line where the water was bad, heating surface must be sacrificed by 13-16 bridges. In the latter case, however, he condemned processing. W. Forsyth lost a motion to have a series of tests made at Purdue on the subject. The committee was continued for another year.

Shop Costs Systems was then discussed after the reading of a paper by A. Lovell. H. H. Vaughan did not agree with the author on the necessity of the surcharge accounts, but commended the system in some respects, one of which concerned the matter of the investment and operating cost of machine tools. The other subjects dealt with were: Result of use of different valve gear; blanks for reporting work on engines undergoing repairs; development of motor cars for light passenger traffic; the abolition of the use of water glasses; the relative merits of outside and inside injector delivery pipes entering the backheads as in P.R.R. practice. F. M. Whyte explained that the committee on the proper width of track gauge on curves had no report to make as yet, because of the lack of adjustment thus far in conference with the Maintenance of Way Association.

At the closing session, in addition to the question of superheating, already referred to, the convention dealt with the following subjects:

The causes of leaks in boiler tubes; blanks for the history of locomotive movements. Following are the subjects to be taken up at the 1908 convention:

1. Laboratory test of various valve gears being used—Stephenson, Walschaert, Alfree-Hubbell and Young—at Purdue or Altoona, to determine their relative efficiency: R. D. Smith, F. H. Clark, W. F. M. Goss.

2. Best system of washing out and refilling locomotive boilers, including blow-off lines, flushing tanks, hot wells, and other similar methods and data pretaining to benefits in the way of reducing defects in firebox sheets, staybolts and tubes: H. T. Bentley, L. H. Turner, W. R. McKeen.

3. Organization of large railroad shop forces: H. H. Vaughan, Jas. Milliken, W. H. Lewis, T. S. Lloyd, A. E. Manchester.

4. A system of accounting for labor and material for railway repair shops: H. Emerson, T. H. Curtis, Le Grand Parish.

5. Handling scrap: H. D. Taylor, D. J. Redding, A. Forsyth.

6. The use of castellated nuts for machinery of locomotives with a view of having some standard dimensions established. Committee to be appointed by the Executive Committee.

Is it desirable to have uniform specifications and drawings of locomotives covering the most common types and sizes? To be presented by G. M. Basford.

Standard definition of the term "engine failure," with a list of locomotive characteristics and the numerous varied conditions of operation on which any definition would need to be predicated, in order to enable comparison to be made. To be presented by M. K. Barnum.

Design and strength of crank axles for balanced compound locomotives. To be presented by F. J. Cole.

The officers for the current year are: President, W. McIntosh, Central Rd. of New Jersey; First Vice-President, H. H. Vaughan, C.P.R.; Second Vice-President, F. H. Clark, Chicago, Burlington and Quincy Rd.; Third Vice-President, G. Wilden, Lehigh Valley Rd.; Members of Executive, C. A. Seley, Chicago, Rock Island and Pacific Rd.; F. M. Whyte, New York Central Lines; J. Howard, New York Central Lines; A. E. Mitchell, New York, New Haven and Hartford Rd.; C. E. Fuller, Chicago and Alton Rd.; T. H. Curtis, Louisville and Nashville Rd.

Railway Commissioners' Traffic Orders.

3148. May 22.—Granting leave to the St. John Ice Company, Ltd., to institute proceedings under sections 399, 401 or 402 of the Railway Act against the New Brunswick Southern Ry. Co., for suffering or permitting W. E. Scully to obtain transportation for goods at less than the required tolls then authorized and in force on the company's railway, and for transporting goods for Scully, and for permitting him to obtain transportation for such goods at less than the regular tolls then authorized and in force on the railway in violation of the provisions of the Railway Act.

GREAT NORTHERN RY. (U.S.) LINES IN CANADA.

3204. June 20.—Granting application of B., S. & H. B. Ry. Co., Bedlington & Nelson Ry. Co., Nelson & Fort Sheppard Ry. Co., Red Mountain Ry. Co., and Vancouver, Victoria and Eastern Ry. and Navigation Co., under sec. 331 of the Railway Act, for approval of their standard passenger tariff C.R.C. 240, showing a rate of 3c. per mile on the B., S. & H.B. Ry., and 4c. per mile on the Bedlington & Nelson, Nelson & Fort Sheppard, Red Mountain, and Vancouver, Victoria and Eastern railways, said tariff to become effective July 1, 1907.

3209. June 20.—Granting application of W. P. Kenney, Assistant Traffic Manager Great Northern Ry., under section 328 of the Railway Act, for authority to restore a commodity rate on sandstone, c.l., from Sandstone, Minn., or eastern terminals, to Winnipeg, Man., upon one day's notice.

ACCEPTANCE OF SHIPMENTS BY G.T.R.

3213. June 25.—In the matter of the complaint of Watson Jack & Co., Montreal, alleging that the G.T.R. Co. refuses to receive at Montreal shipments from the complainants or the Dominion Car and Foundry Co., delivered by the Shedden Forwarding Company. Upon reading what has been alleged in support of the complaint and on behalf of the G.T.R., the Board orders that the G.T.R. is directed to furnish cars and all proper facilities for receiving, loading, and transporting, when and as required, traffic offered by the complainants or the Dominion Car and Foundry Co., irrespective of the carters through whom the traffic is offered.

CANADIAN FREIGHT CLASSIFICATION 12.

3241. July 3.—Approving the Canadian Freight Association's supplement 9 to Canadian Freight Classification 12, subject to the following conditions: That the proposed changes with respect to automobiles and brushes be struck out; that electrical storage batteries and parts, crated, be classified the same as if boxed; and that center, or extension tables, knocked down, legs off, wrapped, be classified as if crated.

CANADIAN FREIGHT CLASSIFICATION 13.

3249. June 29.—Approving Canadian Freight Classification 13, as submitted by the Canadian Freight Association, with the following alterations:

1. That the proposed change in the minimum weight of mixed carload shipments between points east of Port Arthur, as provided for in rule 2, sec. b, be disallowed.

2. That rule 7 be amended by adding to sec. a the following provision: "These conditions are intended to cover risks necessarily incidental to transportation, but no such limitation, expressed or otherwise, shall relieve the carrier from liability for any loss or damage which may result from any negligence or omission of the company, its agents, or employes."

3. That the proposed omission of the reduced rating of stoves that are returned to the shipper after having served their purpose for the protection from frost of perishable shipments, as provided by rule 14, be disallowed.

4. That the proposed increase in the minimum weight of matches, in carloads, from 20,000 to 24,000 lbs. per car, as provided in the classification, be allowed, subject to the condition that the companies provide by commodity tariffs for the shipment of mixed carloads of matches and woodenware at the minimum weight of 20,000 lbs. per carload, as heretofore.

5. That rule 20 describing the minimum charge, or "smalls" rate, be amended to read as follows: "The minimum charge for any complete shipment of one or more classes between any two stations of one carrier will be 100 lbs. at 1st class rates, but not less than 35c."

It is further ordered that any person or company violating the provisions of sec. 400, sub-sec. 1, of the Railway Act, shall, in addition to the regular toll, be liable to pay to the company a further toll not exceeding 50 % of the regular charge.

That the said classification become effective not later than Sept. 1, 1907.

THROUGH FREIGHT RATES TO VICINITY OF MONTREAL

3251, July 2. In the matter of the complaint of Watson Jack & Co., of Montreal, alleging that in consequence of the action of the railway companies, importers are unable to obtain through bills of lading, as formerly, from European ports to rail points between Montreal and Dorval; and that the railway companies will receive goods from the steamship companies at Montreal, when destined to Blue Bonnets, on the G.T.R., only at "shipper's load and count." Upon reading what has been alleged on behalf of the complainants and the G.T.R., and upon the report of its Chief Traffic Officer, and the consent of the G.T.R, the Board orders that the rate on imported iron or steel, Montreal, in carloads, from the Montreal wharves to the company's siding, serving the Simplex Railway Appliance Co., be 2½c. per 100 lbs., including the service of checking the goods from the steamship to the car, the said rate, however, to be exclusive of cartage, handling, and wharfage.

The Intercolonial Ry. has received 39 hopper cars, 30,000 lbs. capacity, from Rhodes, Curry & Co., Amherst, N.S.

The schooner Laura D., in making Swift's wharf, Kingston, Ont., recently, collided with and sank the gasoline launch What Next, owned by J. B. Crouse, Clayton, N.Y.

The U.S. survey steamboat Visitor is making an inspection of the improvements being made at the various harbors, etc., along the Canadian shore of Lake Erie.

The Northern Navigation Co., we are advised, has been making enquiries as to the price of a vessel as an addition to its fleet, but nothing has been decided upon as to whether it will be purchased or not.

The Dominion Government Telegraph line on the north shore of the Gulf of St. Lawrence was reported broken in several places, July 16, and this, with the delay in manning the Marconi stations, has given cause for considerable complaint by the marine interests, as the Atlantic steamships have been coming through the Straits of Belle Isle, and could not get into communication with any station, or get reported at the other points.

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Master Car Builders' Association.

The 41st annual convention of the Master Car Builders was held at Atlantic City, N.J., following that of the Master Mechanics'. W. E. Fowler, C.P.R., Montreal, the President, in the course of his inaugural address said: This Association need fear no criticism on its work of the past; its history is stamped indelibly on the traffic of this country, for its rules for interchange of cars and its standards of construction have made it possible to load a railway car in far-off Edmonton, in the Canadian Northwest, and to deliver it, with its load undisturbed and unbroken, at Mobile, New Orleans, or the City of Mexico. This continent is in full possession of these benefits, and it is hardly possible to realize to what extent progress and civilization would have been retarded if these benefits had been absent. But, our work is not done. Never before in the history of railroading has there been so much attention given by the Government, by the public, and by the thinkers of this continent to the railroads and their operation. The railways have become a vital part of national progress, and the most rapid, the most safe, the most convenient and the most economical is the kind of service that is required, and our part in the development of such service is so plain, so unmistakable, that we must more than ever give our best thoughts, our most earnest consideration to the problems thus set before us. It is a matter of congratulation that the relations of this Association and the Interstate Commerce Commission have always been of the most cordial character. Your committees have under consideration, this year, matters extremely important, made so very largely by the larger carrying capacity of the freight car and the increased power of the locomotive, intensified by the immense growth of the business of the country, and these have made demands upon the railways which have at times been impossible to satisfy. The report of the Arbitration Committee is indicative of these changed conditions, and embodies a number of suggested changes to the rules of interchange, which, coming from so conservative a body, indicates that operating conditions are changing very rapidly.

As stated in the report of the committee on "Cast Iron Wheels," the wheel-makers make an earnest request that the wheel recommended in this report as standard be generally accepted and adopted by the railways represented in this convention, and your President is pleased to heartily recommend that this be done. It was stated by the wheel-makers, in the joint committee meeting, that one of the most serious difficulties they had to contend with was the great variety in design of wheels they were asked to make, entailing the expenditure of a large amount of money in making so many patterns, and making it impossible for them to carry a stock of standard wheels, which, if carried by them, would enable them to fill orders promptly and satisfactorily. As the general use of a standard wheel would result in great economy, I think this would appeal to you.

The reports of the committee on Stresses to which Wheels for 100,000-pound Capacity Cars are Subjected, on Brakeshoe Tests, on M.C.B. Couplers, and on Airbrake Hose, indicate the necessity for a somewhat radical departure in the policy of this Association. The problems which confront us as master car builders are becoming daily more complicated. In early days car construction was crude, and the relation of various parts of cars to each other were such as could be readily understood by men without scientific education. The means of improvement, made use of from time to time, were then not necessarily complex, but it appears quite evident that the future will not yield great improvements except as they may be reached by painstaking, laborious and continuous study and investigation. While, therefore, this Association may well look with pride upon its work of the past in the development of better designs, in the arranging of standards, in the unification of practice, and in making possible the rapid interchange of cars, we must not forget that the problems of the future will necessarily be more complicated, will require greater care in investigation, and increasing assistance from science. The work performed by the committees of this Association has been productive of splendid results, and this Association will necessarily, for a long time to come, depend upon its individual members to serve upon such committees as faithfully as many have done in the past. There are, however, some committees, the work of which has fallen very largely, and in some cases, entirely upon its chairman, and your President deprecates this, believing that in a great many cases the members could, by the exercise of a little self-denial, have attended one or more meetings of the committee to which they belong, and have thus added very much to the value of the report made by the committee.

Some of the railways of this continent have, in times past, generously contributed not only the time of officials, but, in many cases, materials and equipment toward the advancement of committee research, and I believe that there will always be a spirit of this kind manifested by progressive railroads. But, the problems confronting the M.C.B. Association, which were in the past solved by the exercise of good judgment, by careful observation, or by averaging the experience of all interested parties, must in the future, in my opinion, be supplemented by the precise methods of science and materials which were unknown to our fathers, but which promise valuable assistance, must, in many cases, have their physical properties and chemical composition made known before they can be used in practical railroading. Considerations such as these suggest to me the desirability of the organization by the M.C.B. Association of an expert staff, which would be qualified by education and training to handle problems either mechanical, chemical or physical. Such an organization should have its home in a laboratory befitting the dignity of the great interests represented by this Association, such as would be possible at Purdue University, or a similar institution. Not only would the members of such a staff be able to give their undivided attention to the problems of this Association, but the sustained character of their efforts would make their work cumulative. Bringing to bear upon the problems with which they were confronted minds trained for scientific research and habituated to the study of railroad problems, the work of such investigators should be invaluable. Operated under the direction of the Executive Committee of the M.C.B. Association, and sustained by all the railways of the country, such a laboratory and staff, actually in co-operation with the working committees of this Association, would return many times its cost to the railways of the country. I am aware that this organization cannot be arranged for in a day, it must have a small and inconspicuous beginning; but, as that has been the history of the Association I do not think that should deter us from entering, at any early date, upon a plan which will permit an early organization of a small staff of this kind, upon a permanent basis, and I would recommend that this convention request its Executive Committee to consider and act upon this idea if it deems it advisable.

Your President is pleased to note, in the report of the committee on subjects for discussion at the convention of 1908, that the comprehensive problems of better and more economical service of freight cars seem to have been uppermost in the minds of the committee. Your President is of the opinion that the most important factor in this problem is the question of economical maintenance. Too little consideration has been given this matter in the past; freight car repair yards have been located in inconvenient, out-of-the-way places, repair tracks have been set too close together for convenience, the equipment for repairs, both animate and inanimate, has not been of the best, and the consequence has been that cars which should have been returned to service promptly, and with repairs properly made, have been held out of service longer than necessary and were not properly repaired. Never before has there been such pressing necessity for intelligent work, for proper tool equipment and for shelter for the men employed than at the present time. Railways all over this continent have, during the past year, been confronted with a demand for cars which it has been impossible to satisfy, and it would have been still impossible if all of the cars held out of service on account of being in bad order had been repaired promptly and put into service. The held out cars would, however, have helped very materially and would have stopped criticisms made by persons without any real understanding of the situation. It is a reflection on good judgment when vehicles are held out of service for which there is a paying demand at the time, and it would appear that with the attention now concentrated upon the railways that your best efforts are not desirable, but are absolutely necessary for a betterment of the conditions I have referred to.

The other subjects recommended by the committee for reports and topical discussions are all important, more particularly those relating to freight car pooling and the effect of hump yards on freight car damage. Some problems in steel car construction are also recommended by your committee for investigation during the coming year, both with regard to freight car and passenger car design, and as there is no greater foe to the steel car than rust, the subject of protective coatings must necessarily be of great interest, as it would appear that a coating which would be both elastic and tenacious would add very much to the value of our steel cars to-day. The ventilation and heating of passenger cars being a matter under consideration by state and national governments, should also receive the consideration it deserves, and I hope that the committee appointed will arrange to furnish the convention next year some valuable data on this subject.

Although your former presidents have called your attention to the same fact, I must again call your attention to the increasing varieties of M.C.B. couplers, which entails the tying up of an enormous sum in repair parts carried in stock by railway companies, and I believe that some restriction should be placed upon the introduction of new and untried couplers, and a limit be placed on the number of couplers for which railway companies must carry their parts, the listed couplers to be specified by name, railways being permitted in case of failure to scrap couplers not on the list, or to return them to the owners at the owner's expense. This plan may not meet with the approval of some members of this Association, but if this recommendation results in a restriction of some kind being placed on the flood of couplers, a much needed relief will be secured.

The reports of the proceedings of the recent convention of the Airbrake Association at Columbus, Ohio, are now in circulation, and I would strongly recommend their perusal

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to the members of this Association. I may say, however, in passing, that the essence of their conclusions appears to me to be better maintenance, and I am strongly of the opinion that we must have better maintenance of airbrakes if we are to meet demands for increasing rapidity in operation of our freight trains.

Your Executive Committee of this year in making up committees adopted a rule which I would much commend—namely, that of appointing no member on more than one committee, endeavoring also to so arrange committees that all members could be assembled with the least loss of time, and I would suggest that this precedent be followed as closely as possible.

To other associations, such as the Master Painters' and Master Blacksmiths' Associations, we, as master car builders, are much indebted; the associations in their conventions, by discussing their specialties, relieve this Association of much detail work and add very much to the general efficiency of the mechanical department of our railways.

And the railway clubs—who can estimate the benefits received by this Association and by the railways of this country from the work of the railway clubs? Their periodical meetings, which are preparatory and supplementary to these conventions, permit more detail discussion of many subjects than is practicable on the floor of this convention, and the continued growth of these clubs is a strong evidence of the value placed upon club membership by our practical men and they deserve our heartiest support.

The report of the Secretary showed a total membership of 614, divided as follows: Active, 377; representative, 249; associate, 14; life members, 15. The number of cars represented in the Association is 2,254,397, against 2,047,327 in 1906. Thirty-three railways and owners of private cars have signified their desire to become subscribers to the rules of interchange. The expenses for the year were $13,072, and the balance in the treasury was $6,641. The annual dues for the ensuring year were fixed at $4 by the Executive Committee. E. A. Moseley, Secretary of the Interstate Commerce Commission, having addressed the convention, the various subjects for discussion were taken up. Revision of standards and recommended practice, was taken up at the first session; Triple valve tests; Brakeshoes; Rules for loading long materials; Cast iron wheels; Archbars for 80,000-lb. trucks; Airbrake hose specifications; Chemical tests of airbrake hose; Up-to-date car cleaning; Passenger car ventilation; Steel wheels for passenger cars; Means of increasing utilization of the freight car, were discussed at the second session. While at the closing session there were discussions on High speed brake and height of brake staff; Stresses to which wheel for 100,000-lbs. capacity cars are subjected; Coupler clearance; and Truck springs on journal boxes rather than under bolster.

The election of officers resulted as follows: President, S. N. Dow, Lake Shore and Michigan Southern Rd.; First Vice-President, R. F. McKenna, Delaware, Lackawanna and Western Rd.; Second Vice-President, R. W. Burnett, C.P.R., Montreal; Third Vice-President, T. M. Ramsdell, Chesapeake and Ohio Rd.; Treasurer, J. Kirby, Adrian, Mich.; Secretary, J. W. Taylor, Chicago, Ill. D. F. Crawford and F. H. Clarke were elected to the Executive Committee to fill vacancies.

The scholarships at McGill University offered by the C.P.R. to employes or sons of employes have been awarded as follows: L. Johnson, son of J. C. J. Johnson, conductor, St. John, N.B.; D. K. Linach, son of T. Linach, boilermaker, Angus shops, Montreal.

Railway Rolling Stock Notes.

The G.T.R. is reported to be in the market for 25 locomotives.

The Canadian Northern Quebec Ry. has received a new second-class passenger car, and a new express car.

The Temiskaming and Northern Ontario Ry. has received 30 out of an order for 100 flat cars, which are being built in Ontario.

The Canadian Northern Ry. has placed an order with the Locomotive and Machine Co. of Montreal for 20 consolidation locomotives.

The G.T.R. is building at its London, Ont., shops, a mail car similar to the two completed in 1906, and running between Toronto and North Bay.

The Ontario Portland Cement Co., Blue Lake, Ont., is reported to have placed orders for two large motor flat cars and for 10 ordinary flat cars.

The Canadian Locomotive Co., Kingston, Ont., has completed delivery of the 10-wheel locomotives it had on order for the Canadian Northern Ry., and is now delivering consolidation locomotives to the same company.

The 22 consolidation locomotives and the three switching locomotives which the Intercolonial Ry. has ordered from the Canadian Locomotive Co., Kingston, Ont., for delivery during 1908, are the same in every respect as the consolidations and switchers recently built by the company for the I.C.R., which have already been described.

The following rolling stock was added to the G.T.R. equipment between Mar. 24 and June 15: 30 Richmond compound consolidation freight engines, 1 ten-wheel passenger engine, 11 first-class cars, 785 box cars, 135 furniture cars, 2 refrigerator cars, 582 flat cars, 531 stock cars, 977 steel coal cars, 184 side-dump ballast cars, 4 cabooses, 2 snow plows.

The Intercolonial Ry. management expected to have the first of its steam motor cars in service by Aug. 1. The locomotive portion of three of the cars had been completed July 8, at the locomotive shops at Moncton, N.B., and the first of the passenger portion of the cars was received from Rhodes, Curry & Co., Amherst, N.S., a few days afterwards. The two parts were joined at the Moncton shops, and trial runs made to Shediac.

The Canadian Northern Ry. between May 15 and June 15 received the following rolling stock for distribution among its various lines: Five 10-wheel locomotives from the Canadian Locomotive Co., Kingston, Ont.; two switching locomotives from the American Locomotive Co.'s Pittsburg shops; 75 flat cars, four 2nd class cars from the Crossen Car Manufacturing Co., Cobourg, Ont.; 230 box cars, one mail and express car from Rhodes, Curry & Co., Amherst, N.S.; three sleeping cars from the United States.

The Intercolonial Ry. has placed orders for the following rolling stock: 10 consolidation locomotives with the Locomotive and Machine Co. of Montreal; 260 flat cars 80,000 lbs. capacity, 400 box cars 80,000 lbs. capacity, and 25 refrigerator cars 60,000 lbs. capacity, for delivery during Nov. and Dec. of the current year and Jan., 1908, with Rhodes, Curry & Co., Amherst, N.S. 4 vans, and 400 box cars 60,000 lbs. capacity from Crossen Car Manufacturing Co., Cobourg, Ont. Another order has been placed for 50 flat cars, 80,000 lbs. capacity.

During the three months ended June 30, the Locomotive and Machine Co. of Montreal delivered the following: April—10 Richmond compound consolidation locomotives and one steam shovel to the G.T.R.; four steam shovels to the C.P.R. May—One 6-wheel switching locomotive to the B.C. Mines, Timber and Trading Co.; six 10-wheel locomotives to the Canadian Northern Ry.; one 6-wheel switching locomotive to the Dominion Coal Co.; three steam shovels to the C.P.R. June—One consolidation locomotive to the Crow's Nest Pass Coal Co.; 10 consolidation locomotives and two steam shovels to the C.P.R.

Sir Thos. G. Shaughnessy stated during his recent visit to Winnipeg, that the C.P.R. was considering the introduction of electric engines in the Rocky Mountain district. The estimates, he said, from the tests so far made, show very little difference between electric and steam traction with the present volume of traffic. The electric locomotive was slightly more expensive, but with an increase of traffic the difference would be in favor of the electric locomotive. There was a sufficient water supply to generate all the power required in the event of its being decided to inaugurate a system of electric traction.

The G.T.R. has recently completed at its Point St. Charles, Montreal, shops five passenger cars for its Montreal-Chicago service. They are 75½ ft. long, and weigh 106,000 lbs.; they have standard wide vestibules with steel platforms, are mounted on six-wheel trucks, and are equipped with apparatus for steam heating, air-signals and high-speed, quick-action brakes. The seats are of the high swing-back pattern, upholstered in green plush; the centre of the floor is covered with Wilton carpet, and linoleum is used in the passages and smoking-room. The interior finish of the cars is mahogany, and the light is provided by seven four-burner Pintsch gas lamps.

The Canadian Northern Ry. has recently received from the American Locomotive Co.'s Pittsburg works, two heavy 6-wheel switching locomotives. In working order they have an estimated total weight of 145,000 lbs., all of which, of course, is on the driving wheels. The cylinders are 20 ins. in diameter, by 26 ins. stroke, and the driving-wheels are 50 ins. in diameter. With a boiler pressure of 200 lbs. these engines will develop a maximum tractive power of 35,360 lbs. The boiler is of the straight top type, the outside diameter of the first course being 72 ins. The fire-box, which is of the narrow type, is 96 ins. long by 32 ins. wide, which gives a grate area of 21.4 sq. ft. The boiler is fitted with 331 tubes 2 ins. in diameter, and 11 ft. long, having a heating surface of 1,892 sq. ft., which, with 156 sq. ft. of fire-box heating surface, gives a total heating surface of 2,048 sq. ft. The cylinders are equipped with balanced slide valves actuated by link gear. The frames are of heavy section with single rails and cast steel front bumper. Each of these engines is provided with an 8-wheel tender with a water capacity of 5,000 gals. The tender frame is of wood, and the wheels are 33 ins. in diameter, cast iron chilled plate. All the material used in the construction of the engines is to the American Locomotive Co.'s standard specifications. The special equipment includes Westinghouse American combined automatic air-brakes on all driving and tender wheels, operated by 9½ in. air pump; and pneumatic sanders on each sand box.

The C.P.R. has received 25 freight locomotives from the United States recently. The engines are of the consolidation type, and were built to the company's designs and specifications. The equipment includes the Vaughan-Horsey superheater, with 382 sq. ft. of superheating surface, which has been successfully applied to a large number of locomotives on this road. The tractive power is 37,400 lbs. The boilers are of the wagon top type, with three rings in the barrel. The superheater is accommodated in 24 steel tubes 5 ins. in diameter, and 3-16

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ins. thick. Each 5-in. tube contains 4 superheater pipes, which are of weldless steel, 1¼ ins. in diameter. These pipes extend to within 30 ins. of the back tube sheet, where they are connected in pairs by steel return bands. The headers in the smoke-box are of cast iron. The boiler is designed for a pressure of 200 lbs. per square inch, while the safety valves are set for 180 lbs. The longitudinal seams in the barrel are butt-jointed and welded at the ends. On the dome course the seam is placed on the top center line, and is welded throughout, with a liner ¾ in. thick placed inside. The distance between the centers of the 2 in. tubes is 2⅞ ins. at the fire-box end, and 2¾ ins. at the smoke-box end. Removable lagging panels are provided over the staybolts in the throat, sides and back head. The injectors are placed right and left, with a check valve on the under side of the boiler barrel. The cylinders are bushed with liners of hard cast iron, ½ in. thick. They are equipped with inside admission piston valves, 11 ins. in diameter, and working in bushings 1 in. in thickness. The valve motion is direct acting. The links are provided with double suspension hangers, thus reducing twisting strains. The rock shafts are of cast steel, and the rock shaft boxes are provided with hard bronze bushings. All parts of the motion work subject to wear are casehardened. The frames are of steel, with wrought iron double front rails. The cross braces include two steel castings, which are placed back of the first and third pairs of pedestals. The equalization system is broken between the second and third pairs of driving wheels. The tender frame is of steel, with 13 in. channels for the center sills and 10 in. channels for the side sills. The trucks are of the arch bar type, with triple elliptic springs. The tank has a water bottom, with sloping sides and floor in the fuel space. Following are the general dimensions, etc.:

CYLINDERS.—22½ x 28 in.; valves, balanced piston.
BOILER.—Diameter, 70⅜ in.; thickness of sheets, 11/16, ¾ and 13/16 in.; fuel, soft coal; staying, radial.
FIRE-BOX.—Material, steel; length, 96⅜ in.; width, 65¼ in.; depth, front, 77⅝ in.; depth, back, 62⅛ in.; thickness sheets, sides, ⅜ in.; thickness sheets, back, ⅜ in.; thickness sheets, crown, ⅜ in.; thickness sheets, tube, ½ in.;
WATER SPACE.—Front, 5 in.; sides, 4½ in.; back, 3½ in.
TUBES.—Diameter, 5 and 2 in.; material, 5 in. steel, 2 in. iron; thickness, 5, 7/16, 2 in., no. 11 W.G.; number, 5 in., 24; 2 in., 240; length, 14 ft. 2½ in.
HEATING SURFACE.—Fire-box, 165 sq. ft.; tubes, 2,217 sq. ft.; total, 2,382 sq. ft.; grate area, 43 sq. ft.
DRIVING WHEELS.—Diameter, outside, 58 in.; diameter, center, 51 in.; journals, main, 9½ x 12 in.; others, 9 x 12 in.
ENGINE TRUCK WHEELS.—Diameter, 31 in.; journals, 6 x 11 in.
WHEEL BASE.—Driving, 15 ft. 10 in.; rigid, 15 ft. 10 in.; total engine, 24 ft. 4½ in.; total engine and tender, 53 ft. 9½ in.
WEIGHT.—On driving wheels, 167,950 lbs.; on truck, front, 22,250 lbs.; total engine, 190,200 lbs.; total engine and tender about 310,000 lbs.
TENDER.—Wheels, number, 8; wheels, diameter, 33 in.; journals, 5½ x 10 in.; tank capacity, 6,000 gals.; fuel capacity, 10 tons; service, freight.

International Railroad Master Blacksmiths' Association.—The 15th annual convention will be held at Montreal, Aug. 20 to 22 inclusive. The list of subjects and the chairmen of the committees to report concerning them are as follows: Flue welding.—John Conners; Tools and formers for bulldozers and steam hammers.—G. M. Stewart; Piece work.—G. Bollinger; Discipline and classification of work.—S. Uren; Case-hardening methods, time taken and samples.—G. Masser; Best fuel for use in smith shop.—J. Jordan; Frame making, either steel or iron; also repairing frames.—G. Bollinger; Thermit welding.—G. Kelly; What can each member do to increase the usefulness of the association.—G. F. Hinkens.

The Ontario Railway and Municipal Board will during Aug. make a complete inspection of all the steam and electric railways under its jurisdiction.

C.P.R. Betterments, Construction, Etc.

Ottawa, Northern and Western Ry.—We are advised that the subsidy contract entered into between the Dominion Government and the O.N. and W. Ry., in respect to the construction of about nine miles of railway, between Aylmer and Hull, Que., is a matter that altogether deals with the line before it was taken over by the C.P.R. The mileage in question was constructed some years ago and the delay in getting the subsidy put through was owing to some difference between the Department of Railways and H. J. Beemer, relative to the non-deposit of plans. This has now been rectified and the contract was formally entered into so as to enable the subsidy to be paid over.

Belly River Bridge.—The bridge which the C.P.R. is erecting over the Belly River at Lethbridge, Alta., consists of 67 spans in all, comprising 44 spans of 67 ft. 3 in. each; 22 spans of 100 ft. each, and one span of 167 ft., totalling 5,327 ft. in all from fore to fore of masonry ballast walls. The superstructure of the bridge will be a steel trestle with a height for about two-thirds of its total length of approximately 290 to 325 ft. from ground line to base of rail. The tower of the viaduct will be supported on a concrete pedestal. Concrete piles are to be used in foundations excepting under piers in the river where wooden piles will be used. The steel work will weigh, approximately, 10,000 tons, and will be manufactured and erected by the Canadian Bridge Co., Walkerville, Ont. About 14,000 cubic yards of concrete, 1,400 concrete piles, and 1,200 lineal feet of wooden piles will be required in the substructure. Tenders for the substructure were received to July 15 by J. Callaghan, Division Engineer of Construction, Winnipeg.

Field-Hector Grade Reduction.—It is expected, we are advised, that work in connection with the reduction of the gradient between Field and Hector, B.C., will be started some time during the current season.

Bridge at Revelstoke.—We are advised that construction work will be started during the current season on the new bridge over the Columbia River at Revelstoke, B.C.

Kitsalano Beach Hotel.—The proposal to erect a tourist hotel at Kitsalano Beach, Vancouver, B.C., has been considered by the C.P.R., and it has been decided not to take any steps towards the erection of such a structure, at any rate for the present.

Nominingue to Maniwaki.—Construction is being gone on with on a line from Nominingue, the present terminus of the Northern Colonization Ry., and Maniwaki, the terminus of the old Ottawa and Gatineau Ry., now the Ottawa, Northern and Western Ry. It is expected that about one-half of the grading will be completed this season.

Eastern Cattle Market, Montreal.—By an arrangement with the Montreal City Council the C.P.R. has secured possession of the eastern cattle market in exchange for some land in St. Henri Ward. The company agrees to expend $180,000 as required to equip the yards for the trade.

Merrickville Trestle.—The Board of Railway Commissioners has authorized the C.P.R. to replace the present trestle over the Rideau near Merrickville, Ont., with a permanent steel bridge on stone abutments, with a subway which will have an opening of 24 ft.

Guelph and Goderich Ry.—The portion of this line from Milverton to Blyth, Ont., was opened for traffic July 8. The additional mileage into Goderich is expected to be opened in the fall.

The plans for the construction of a line from St. Mary's through Stratford and Listowel to a junction with the Guelph and Goderich Ry., are in preparation, according to a Stratford report.

Tillsonburg, Lake Erie and Pacific Ry.—A subsidy contract has been entered into between the T.L.E. and P. Ry. Co., which is leased to the C.P.R. for 999 years, for the construction of a line from Woodstock northerly to the G.T.R., or from Ingersoll to Stratford, Ont., 35 miles. The T.L.E. and P. Ry. is extending its line from Ingersoll to Embro, where it is to effect a junction with the St. Mary's and Western Ontario Ry., which line will be operated by the C.P.R. when completed.

Fort William-Winnipeg Second Track.—It is expected to have about 250 miles of the second track between Fort William, Ont., and Winnipeg, in operation by the end of the current season.

Winnipeg-Brandon Second Track.—A press report from Winnipeg states that it has been decided to construct a second track between that point and Brandon, 133 miles, and that the work between Winnipeg and Portage la Prairie will be put in hand at once. The matter was casually mentioned during the sittings of the Board of Railway Commissioners at Winnipeg, and W. Whyte, Second Vice-President, stated July 16, on his return from British Columbia, that the second track work would be gone on with, as the transportation needs of the country had sufficiently developed to warrant it.

Estevan Improvements.—Plans have been completed for a new station and a 21-stall roundhouse at Estevan, Sask.

Weyburn-Stoughton Line.—Tracklaying is in progress on the line between these two points, five miles being reported laid July 11. Work is being gone on with from the Stoughton end.

Strasburg, Northerly.—A press report states that a contract has been let to W. F. Braden for the construction of 40 miles of track from Strasburg, Sask., northerly. Strasburg is the present terminus of the Kirkella branch, and the 40 miles referred to would extend it to a junction with the line now under construction from Sheho to Saskatoon.

Bridge at Saskatoon.—By an arrangement between the town council of Saskatoon, Sask., and the company, the new bridge which is to be erected across the Saskatchewan River at this point, will provide for vehicle and foot traffic. The town will provide $20,000 towards the cost.

Saskatoon Station and Yard.—The plans for the station, freight shed and yards at Saskatoon, Sask., have been received and tenders have been invited. The plans call for a building of stone, brick and steel, about 160 ft. long, by 50 ft. deep from the platform. It will be two storeys high, and there will be a tower 40 ft. high at the west end. The platform will be about 500 ft. long. The accommodation for the public will be entirely on the ground floor, and the upstairs will be devoted to the operating and other officials. The freight sheds are east of Avenue A, and will be 325 ft. long. The yard accommodation at this point is not very extensive, owing to the fact that the company could not purchase all the land it desired. A section and a half of land has been bought at the east end of the town upon which the principal freight yard, the roundhouse, and shops will be located.

Crow's Nest Pass.—Work is in progress on what is practically a new line between Pincher Creek and Crow's Nest Pass, in order to secure a shorter line and a better gradient. The line originally constructed was abandoned about seven years ago for the present line. Residents along this line are asking that the line at present in use be not abandoned when the new one is completed.

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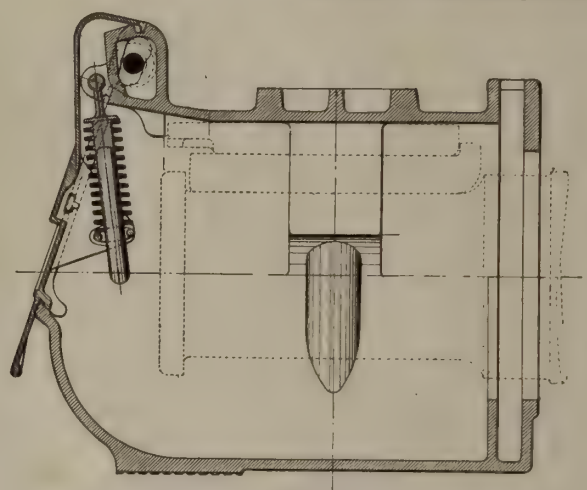

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Kootenay Central Ry.—W. Whyte, Second Vice-President, returned to Winnipeg, July 15, after having traversed the route of this projected line from Golden to Fort Steele, B.C., about 176 miles. Upon his report will depend when the construction of the line will be gone on with.

Fire Protection for Passenger Cars.

The Board of Railway Commissioners passed the following order, No. 3238, July 3: In pursuance of the powers conferred upon it by the Railway Act secs. 30, and 269, and of all other powers possessed by the Board in that behalf, the Board orders that every railway company subject to the legislative authority of the Parliament of Canada operating a railway by steam power, equip, within the times hereinafter mentioned, each of its passenger coaches with two fire extinguishers, to be placed one at each end of the car—at the end of the hallways, with framed and printed notices of instruction as to the proper method of using the same in case of fire, as follows: In cars to be constructed in the future for use on their said railways, before they are so used; in cars under construction or in shops undergoing repairs, within six months from the date of this order; in cars at present in use on their respective railways, within 18 months from the date of this order. The said fire extinguishers to be such as shall be approved by the Board, diagrams and descriptions of which shall be furnished by the railway companies respectively. That every railway company have the said fire extinguishers inspected and recharged once in every three months; cause records of such inspections to be kept by the foremen in charge of the passenger coaches at the different terminals where inspections are made; and see that copies of such records, certified by such foremen, are regularly forwarded to the Board. That every such railway company be liable to a penalty not exceeding $25 for every failure to comply with the foregoing regulations within the time for their coming into force, and thereafter.

Fort William Terminal Ry. and Bridge Co.—A meeting of shareholders has been called to be held at Fort William, Ont., Aug. 20, for the organization of the company, the election of directors, the making of contracts for the construction of the bridge and railway, and for the issue of stock, bonds and debentures in connection therewith. Dowler & Sinclair, Tillsonburg, Ont., are solicitors for the provisional directors.

Wages Disputes and Arbitration.—Under the act, known as the Lemieux Act, passed by the Dominion Parliament last session, the following arbitration proceedings are now in progress: Inverness Ry. and Coal Co., J. D. Mathieson, men's representative; others not appointed. G.T.R. and locomotive engineers, Wallace Nesbitt represents the railway; J. Cardill, C.P.R., Calgary, Alta., represents the men, and Professor Adam Shortt, Kingston, Ont., is third arbitrator. An arbitration is also in progress under another act between the Intercolonial Ry. and its freight handlers at Halifax, N.S., the arbitrators being: H. Holgate, C.E., Montreal, representing the railway; R. E. Finn, representing the men, and Professor W. Murray, McGill University, Montreal, third arbitrator.

D. A. Starr, General Manager Clyde Valley Electric Power Co., Glasgow, Scotland, writes: "I have found THE RAILWAY AND MARINE WORLD very interesting."

The plans for new engineering buildings at McGill University, Montreal, have been prepared. The new buildings will be larger than those destroyed by fire in April, and are estimated to cost $275,000.

TRANSPORTATION APPOINTMENTS.

Canadian Northern Ry.—In our June issue we stated that F. Shaw had been appointed commercial agent, and A. Macdonald contracting freight agent Canadian Northern Quebec Ry., at Montreal. It should have been stated that they had been appointed by the Canadian Northern Ry., and a correction to this effect was written for our July issue, but C.P.R. was erroneously printed instead of C.N.R.

M. H. McLeod, Chief Engineer, has been appointed General Manager and will for the present, at least, also act as Chief Engineer. Since the retirement of E. A. James, who was Manager, the duties of General Manager, a new position, have been temporarily performed by D. B. Hanna, Third Vice-President.

W. A. Brown, General Superintendent, has resigned and it is probable that the position will be abolished. It is said that a Superintendent of Transportation may be appointed, and that the position of Assistant to the General Manager may be created.

Canadian Pacific Ry.—C. E. De Rouville, heretofore chief clerk Chateau Frontenac, Quebec, has been appointed manager, succeeding J. H. Phillips, deceased.

W. H. Sleep, heretofore foreman blacksmith G.T.R., Point St. Charles, Que., has been appointed master blacksmith C.P.R. Angus shops, Montreal.

W. H. MacCallum, heretofore chief clerk to the General Passenger Agent C.P.R. Atlantic Steamships, has been appointed Travelling Passenger Agent for the C.P.R. Atlantic Steamship Lines. Office, Winnipeg, Man. This is a new position.

W. G. Preston has been appointed Chief Train Dispatcher, District 3, Central Division, C.P.R., at Brandon, Man., vice C. D. Fisher, resigned to enter the G. T. Pacific Ry. service.

F. H. Sproule has been appointed contracting freight agent at Saskatoon, Sask. He will look after business routed via Regina for points on Canadian Northern Ry. line, Saskatoon and south.

W. C. S. Newmarch, heretofore locomotive foreman, Calgary, Alta., is reported to have been appointed general foreman there.

J. O. Moe has been appointed District Passenger Agent at Nelson, B.C.

E. P. Allen, heretofore travelling passenger agent at Syracuse, N.Y., is reported to have been appointed city passenger and freight agent at Washington, D.C.

Delaware and Hudson Co.—C. E. McKim, heretofore General Inspector of Transportation Louisville and Nashville Rd., has been appointed Superintendent of Car Service, D. and H. Rd. Office, Albany, N.Y.

Grand Trunk Pacific Ry.—Geo. Gregory has been appointed Trainmaster and Locomotive Foreman at Fort William, Ont.

C. D. Fisher, heretofore Chief Train Dispatcher C.P.R., District 3, Central Division, Brandon, Man., has been appointed Trainmaster and Chief Dispatcher, G.T.P. Ry. Office, Portage la Prairie, Man.

Grand Trunk Ry.—W. Wainwright, heretofore General Assistant and Comptroller, has been appointed Fourth Vice-President. The position of General Assistant and Comptroller has been abolished. Office, Montreal.

Jos. Hobson, heretofore Chief Engineer, has been appointed Consulting Engineer. Office, Montreal.

H. G. Kelley, heretofore Chief Engineer, Iowa Central Ry., Minneapolis, Minn., has been appointed Chief Engineer G.T.R., succeeding Jos. Hobson, assigned to other duties. Office, Montreal.

W. McNab, heretofore Assistant Engineer, has been appointed Principal Assistant Engineer. Office, Montreal.

C. E. Dewey, heretofore Division Freight Agent, Toronto, has been appointed Assistant General Freight Agent. Office, Montreal.

R. W. Scott, heretofore agent at Portland, Me., has been appointed freight agent, Montreal terminals, succeeding J. M. Riddell, who goes to Portland, Me., as agent.

L. Macdonald, heretofore Division Freight Agent, Hamilton, Ont., has been appointed Division Freight Agent, Toronto.

R. W. Long, heretofore Division Freight Agent, Stratford, Ont., has been appointed Division Freight Agent, Hamilton, Ont.

G. T. Pettigrew, heretofore chief clerk, to Foreign Freight Agent, Montreal, has been appointed Division Freight Agent, Stratford, Ont.

J. A. Sheedy has been appointed Master of Bridges and Buildings, Western Division, with charge of all matters pertaining to the Bridge and Building Department. Office, Durand, Mich.

Great Northern Ry., U.S.—C. L. Mayne, heretofore Superintendent Terminals G.T.R., Montreal, has been appointed Division Superintendent G.N.R., succeeding J. E. Hood, resigned. Office, Spokane, Wash.

C. E. Leverick, heretofore Assistant Division Superintendent at Melrose, Minn., has been appointed Superintendent of the Minot Division, at Minot, N.D., succeeding G. S. Stewart, transferred to the Breckenridge, Minn., Division.

F. S. Elliott has been appointed Assistant Superintendent Kalispell Division, succeeding M. Sawyer, resigned. Office, Whitefish, Minot.

Intercolonial Ry.—Press reports state that the Dominion Government railways' management has decided to open an office and have an official representation in London, Eng. E. Tiffin, General Traffic Manager, went to England July 6, and it is said he is making the necessary arrangements.

Merchants' Dispatch Transportation Co.—Following are the officers for the current year: President, W. H. Newman; Vice-President and General Manager, W. B. Pollock; Treasurer, E. L. Rossiter; Secretary, D. W. Pardee; Auditor, R. A. White.

New Brunswick Southern Ry.—A press despatch from St. John, N.B., July 17, contains the following: J. Beckwith, engineer, has arrived from the head offices of the C.P.R., in Montreal, and is now practically rebuilding the N.B.S. Ry. He will take full control of the maintenance of way of the line, and will, it is understood, work under instructions from W. Downie, General Superintendent Atlantic Division, C.P.R. Thomas Sterns, trackmaster C.P.R., has been appointed trackmaster N.B.S. Ry.

New York Central Lines.—W. J. Wilgus, Vice-President in charge of maintenance and construction, has resigned, and will vacate his position Oct. 1.

Northern Pacific Ry.—J. C. Roth has been appointed Assistant Superintendent of Transportation. Office, Tacoma, Wash.

P. H. McCauley has been appointed Car Accountant. Office, St. Paul, Minn.

Pennsylvania Rd.—W. H. H. Willis, heretofore special agent Traffic Department at Pittsburg, Pa., has been appointed acting Canadian Freight Agent, vice E. D. MacKenzie, furloughed. Office, Traders Bank Building, Toronto.

Richelieu and Ontario Navigation Co.—J. V. O'Donahoe has been appointed Manager's Assistant. Office, Montreal.

Toronto, Hamilton and Buffalo Ry.—C. M. Sinclair has been appointed local freight agent at Hamilton, Ont., succeeding C. Donovan.

D. W. Pardee, Secretary New York Central and Hudson River Ry., has been elected also Secretary T.H. and B. Ry.

(Continued on page 593.)

* see correction in September

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Orford Copper Co., New York	582
Owen Sound Wire Fence Co., Ltd., Owen Sound.	616
Page Wire Fence Co., Ltd., Walkerville, Ont.	616
Pere Marquette Rd.	628
Peter Smith Heater Co., Detroit, Mich.	600
Phillips, Eugene F., Electrical Works, Ltd.	610
Piper, The Hiram L., Co., Ltd., Montreal	630
Piper, N. L., Railway Supply Co., Ltd., Toronto.	610
Polson Iron Works, Ltd., Toronto	574
Porter, H. K., Co., Pittsburgh, Pa.	568
Positive Lock Washer Co., Newark, N.J.	628
Prowse, G. R., Montreal	—
Pyke, J. W., & Co., Montreal	588
Pyle National Electric Headlight Co., Chicago.	560
Rail Joint Co., of Canada, Ltd., Montreal	560
Railway Materials Co , New York City	627
Rhodes, Curry & Co., Ltd., Amherst, N.S.	578
Robb Engineering Co., Ltd., Amherst, N.S.	578
Robertson, A. J., Montreal	591
St. Thomas Brass Co., Ltd., St. Thomas, Ont.	604
Safety Car Heating & Lighting Co., New York.	574
Sheriffs Mfg. Co., Milwaukee, Wis.	624
Simplex Railway Appliance Co., Ltd. ..... Cover 4	
Smart, James. Mfg. Co., Ltd., Winnipeg, Man.	—
Soule Raw Hide Lined Dust Guard Co.	602
Standard Car Truck Co., Chicago, Ill.	594
Standard Coupler Co., New York City.	590
Standard Explosives, Limited, Montreal	
Standard Inspection Bureau, Ltd., Toronto.	584
Standard Steel Works, Philadelphia, Pa.	598
Steel Concrete Co., Ltd., Montreal	606
Stevens, F. B., Detroit, Mich.	608
Submarine Signal Co., Boston, Mass.	606
Taylor, Homer, Montreal	627
Torbert, A. C., & Co., Chicago, Ill.	606
Toronto Bolt and Forging Co., Ltd., Toronto.	606
Toronto Engraving Co., Toronto	606
Toronto Pressed Steel Co., Ltd., Toronto.	606
United Typewriter Co., Ltd., Toronto.	572
Valentine & Sons Publishing Co., Montreal	627
Vulcan Iron Works Co., Toledo, Ohio.	627
Vulcan Iron Works, Wilkes-Barre, Pa.	630
Washburn Steel Castings & Coupler Co., The.	590
Wire & Cable Co., Montreal	620
Wolfe Brush Co., Pittsburgh, Pa.	618
Wood, G. S., Chicago, Ill.	622
Woodman, R., Mfg. and Supply Co., Boston, Mass.	

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TRANSPORTATION APPOINTMENTS.

(*Continued from page 589*)

Transcontinental Ry. Commission.—Gordon Grant, C.E., has been appointed Inspecting Engineer for the Commission, and not Inspector of Construction as previously reported. Headquarters, Ottawa.

Trunk Line Association.—C. C. McCain, heretofore in charge of the Lake Lines office at Buffalo, N.Y., has been appointed chairman of the Trunk Lines Association, with office at New York.

Wabash Rd.—C. H. Newton, heretofore freight agent at Toledo, Ohio, has been appointed General Agent Freight Department. Office, St. Louis, Mo.

Canadian Ticket Agents' Association.

A meeting of the Executive Committee was held in Toronto, July 11; present, W. McIlroy, President; W. Bunton, R. J. Craig, C. E. Horning, and E. de la Hooke, Secretary. After a conference with C. B. Foster, District Passenger Agent C.P.R., and J. D. McDonald, District Passenger Agent G.T.R., the following arrangements were decided on for the Winnipeg trip: Toronto will be left on a special train of sleeping cars, with a dining and a baggage car on Thursday, Oct. 10, at about 10 p.m. Should the number of passengers warrant it a sleeping car will leave Montreal on C.P.R. train 97 for North Bay, where it will be attached to the special from Toronto, which will then run from North Bay as the second section of train 97 to Port Arthur, arriving there Saturday, Oct. 12, about 10 a.m. The day will be spent in Port Arthur and Fort William, leaving the latter place about 6.30 p.m., and arriving in Winnipeg, Sunday, Oct. 13, about 9 a.m. The annual meeting will be held in Winnipeg on Monday, Oct. 14, and a dinner the same evening. The special train will leave Winnipeg for the return journey Wednesday, Oct. 16, about 4 p.m., arriving at North Bay, Friday, Oct. 18, about 6 a.m., and proceeding to Toronto.

Breakfast and supper will be served on the dining car a la carte, and dinner at $1. The Canadian Pacific and Canadian Northern Railways will supply individual transportation to members and their wives who may wish to go west of Winnipeg. The number availing themselves of this privilege and their destinations will regulate any special car arrangements which may be made. United States lines will grant individual transportation for the return trip via Chicago to such members of the Association and their wives as may be entitled to it under the Interstate Commerce Commission's ruling, which bars from free transportation any who are not wholly employed in railway work, with its adjuncts of express and telegraph service.

The Maritime Coal, Ry. and Power Co. has completed the installation of its plant to supply power from the collieries to the industries of Amherst, N.S. N. Curry, President of Rhodes, Curry & Co., Ltd., has been appointed a member of the local committee to arrange for the proper celebration of the starting of operations of the plant.

J. V. O'Donahoe, who has been appointed Manager's Assistant Richelieu and Ontario Navigation Co., was born at Brockville, Ont., May 27, 1881; entered transportation service with the Canada Atlantic Ry. and Canada Atlantic Transport Co., at Depot Harbor, Ont., since his record has been: Jan., 1899, to Jan., 1905, in same companies' audit department at Ottawa; Jan., 1905, to July, 1907, private secretary and chief clerk to General Manager, R. & O. N. Co.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Toronto Bolt and Forging Co. is erecting a $30,000 building at Swansea, Ont. It is to be 70 ft. by 100 ft. and will be of stone, iron and steel.

The Goold-Shapley and Muir Co., Ltd., are erecting a new warehouse, blacksmith and galvanizing shops at Brantford, Ont., at a cost of $27,000.

H. H. Hewitt, President Magnus Metal Co., has announced the following appointments: Managing Director, D. W. Ross; Manager Sales Department, W. H. Croft; General Manager, W. S. Bostwick.

The Safety Car Heating and Lighting Co., New York, has increased its capital stock from $5,000,000 to $10,000,000, the new stock to be issued to present holders as a 100% stock dividend. The regular dividend of the company for the past two years has been at the rate of 18%.

Robt. W. Hunt & Co., whose general offices are in Chicago, and who have a branch office in Montreal, have been given the inspection of the material for the Southern Pacific Co.'s rifled pipe line. This embraces 256 miles of 8 in. rifled pipe, and the machinery for 24 pumping stations, covering 46 duplicate pumps, and 72 boilers.

The Washburn Steel Castings and Coupler Co., Minneapolis, Minn., has issued an illustrated catalogue descriptive of its complete line of couplers for traction service. The descriptions and illustrations show couplers for all classes of service and special attention is drawn to those specially designed for electric car service, where connection is made with steam railways and there is an interchange of cars.

The McConway & Torley Co., manufacturers of the Janney, Kelso and Pitt couplers, and the Buhoup 3-stem equipment, Pittsburg, Pa., have issued the "Car Repairman's Guide." It is an unpretentious little book, but contains a lot of useful information for the car repairmen who make the repairs to the cars in the yard, and will be of great assistance in making requisitions for repair material. The introduction calls attention to the desirability of ordering repair parts from the manufacturer of the coupling device. There has been a great deal of discussion upon this question, and it is well known that a great deal of trouble in making repairs, and delay to cars while waiting for such repairs to be made, has been occasioned by the attempt to use repair parts in couplers that were not made by the manufacturers of the couplers, and that were either inferior in material or workmanship or made to incorrect patterns, and for this reason could not be readily applied in making the repairs, and when applied do not operate properly. The object of the pamphlet is to place definite information in the hands of the men so that proper repairs may be secured and these needless troubles obviated. A copy of the pamphlet will be sent to any railway man to whom it might be useful, and who will write for it.

The Department of Railways and Canals is receiving tenders to Aug 5, for works connected with the construction of section 5, Ontario-Rice Lake division, Trent Canal.

Orders for Establishment of Shelters.

The Board of Railway Commissioners has passed the following orders:

3226. June 26.—Upon the application of the Fort Erie, Ont., Board of Trade. That the G.T.R. Co. do forthwith erect and maintain at or near the former site of its Fort Erie station at Amigari, a small building or shelter for the accommodation of passengers getting on or off G.T.R. trains at this point, a plan of such building to be submitted to the Engineer of the Board for his approval. That the company stop a morning and an evening train in each direction (four trains in all) to accommodate passengers desiring to get on or off said trains at said point.

3253. June 25.—Upon the application of the municipal corporation of St. Omer parish. That the Atlantic and Lake Superior Ry. Co. be directed to erect on its line of railway between Nouvelle and Carleton stations in the parish of St. Omer, Que., a shelter, enclosed on all sides, with a door and an outside platform, the passenger compartment to be not less than 16 by 12 ft., floored and weatherproof, with seating accommodation for at least 10 persons; such shelter to be properly lighted by glazed windows, and at train time, after dark, by lamp; and sufficiently heated at train times during the winter, the building to be kept clean at all times, and the platform reasonably clear of snow. It is further ordered that the station be shown on the company's timetables and tariffs, and be placed in charge of a caretaker who shall reside near enough to perform properly the duties required by this order. The passenger fares to be those for the correct St. Omer mileage.

Meetings at Lake St. Joseph.

The Eastern Canadian Passenger Association held a meeting at Lake St. Joseph, Que., July 9, and enjoyed a luncheon at the hotel and a sail on the lake. The Quebec Transportation Club had prepared for entertaining the members in Quebec, but owing to lack of time they were unable to accept. A special vote of thanks was tendered A. Hardy, G.P.A. Quebec and Lake St. John Ry., for his hospitality and his untiring and successful efforts to make the visit a pleasant one.

On the following two days the Canadian Freight Association met at the same place and the members expressed themselves as greatly pleased with the hotel and its surroundings. A dance was held the first evening, and shortly after noon on the second day the party returned to Quebec by special train on the Q. and L. St. J. Ry., and were taken in hand by the Quebec Transportation Club. They were conveyed on the Quebec and Levis Ferry Co.'s steamboat Pilot for a sail round the harbor, running alongside the Italian cruiser Varese and then proceeded to Point Levis, whence they were taken on a special train to the Quebec bridge, on which they went out as far as possible on the portion under construction on the south side, the train being the first passenger one to go on the bridge. On returning to Point Levis the party again embarked on the Pilot, which went down the river past Indian Cove, where the wrecked S.S. Bavarian was viewed. The Pilot then crossed the river to afford the visitors a view of Montmorency Falls. On nearing the breakwater the Pilot was stopped alongside the C.P.R. steamship Empress of Ireland, and at 6 p.m. most of the party proceeded west by the R. and O.N. steamboat. The whole outing was a most enjoyable one. The Quebec Transportation Club had made excellent arrangements for entertaining the visitors and the party were much indebted to the members of the club in general and particularly to its Secretary-Treasurer, A. H. Davis, who had direct charge of the arrangements.

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MAINLY ABOUT PEOPLE.

Sir Sandford Fleming, K.C.M.G., has retired from the directorate of the Hudson's Bay Co.

Sir H. Montague Allan, and Lady Allan, left Montreal, July 9, for a trip to Vancouver, B.C.

E. Carruthers, G.T.R. freight agent, Quebec, left for England July 20, on a holiday trip.

P. Larson, of Foley, Lock & Larson, railway contractors, died at Helena, Mont., July 12, aged 57.

R. J. Gould, G.T.R. yardmaster at the London, Ont., car shops, was run over and killed June 22.

Jos. Hobson, Consulting Engineer, G.T.R., sailed from Montreal, July 5, for a holiday trip to Europe.

M. E. McIntosh, C.P.R. train dispatcher, Kenora, Ont., was married there, July 3, to Miss E. H. Belyea.

W. G. Ross, Managing Director Montreal Street Ry., has been elected a director of the Dominion Iron and Steel Co.

H. R. MacCormick, C.P.R. station agent at Letellier, Man., was drowned while bathing in a pond at that place July 10.

Mrs. C. H. Hubbell, only daughter of G. N. Asselstine, C.P.R. ticket agent, Gananoque, Ont., died at Edmonton, Alta., June 29.

J. A. Armstrong, who resigned his position as C.P.R. roadmaster at Medicine Hat, Alta., recently, is now ranching in that district.

Miss B. M. Conmee, daughter of J. Conmee, M.P., railway contractor, Port Arthur, Ont., was married there, June 25, to M. G. Kelly.

B. Van Horne, of the Cuba Co., and Mrs. Van Horne, are spending the summer with Sir Wm. and Lady Van Horne at St. Andrews, N.B.

J. I. Cote, a sub-contractor on the Canadian Northern Ontario Ry., was drowned by the upsetting of a canoe at Key Harbor, Ont., July 11.

D. Mackenzie, eldest brother of W. Mackenzie, President Canadian Northern Ry., died at his home, Kirkfield, Ont., July 2, aged 74.

Mrs. H. D. Lumsden, wife of the Chief Engineer, National Transcontinental Ry. Commission, has gone to Orillia, Ont., for the summer.

Lord Mount Stephen has subscribed £10 towards the fund which is being raised to send a British rifle team to Canada and Australia.

G. C. Jones, General Manager Central Vermont Ry., Mrs. Jones, and two nieces, spent some days in July at Niagara-on-the-Lake, Ont.

A. C. Dennis, formerly Division Engineer Grand Trunk Pacific Ry., with headquarters at Winnipeg, is now with the Western Pacific Ry. at Amedee, Cal.

E. Tiffin, General Traffic Manager, Intercolonial Ry., and Mrs. Tiffin, sailed on the Allan Line S.S. Virginian, from Quebec, July 5, for Great Britain.

Mrs. Mann, wife of A. R. Mann, President Northern Construction Co., died of cancer at Preston Springs, Ont., July 2, and was buried at Acton, Ont.

Miss C. M. Cross, daughter of W. Cross, Assistant to the Second Vice-President, C.P.R., Winnipeg, was married there June 26, to R. L. Denison, Winnipeg.

Francis King, M.A., of Kingston, Ont., Secretary of the Dominion Marine Association, has been elected Secretary of the Anglican Diocese of Ontario.

D. A. McCaskill, who founded the firm of McCaskill, Dougal & Co., Montreal, from which he retired in 1902, died at Lausanne, Switzerland, July 14, aged 62.

A. D. MacTier, Assistant to the Vice-President, C.P.R., accompanied by Mrs. MacTier and family, sailed on the Empress of Britain, June 28, for a trip to Great Britain.

Barlow Cumberland, Vice-President Niagara Navigation Co., was elected President of the Ontario Historical Society, at the annual meeting held at Kingston, Ont., July 19.

A. N. Stonegrave, who died at Jamaica Plain, Mass., recently, was the only son of A. C. Stonegrave, Montreal, Canadian Freight and Passenger Agent, Central Vermont Ry.

Jno. Hunter, who died at Huntingdon, Que., June 23, aged 59, was actively engaged in the promotion of the Montreal and Champlain Junction Ry., now part of the G.T.R. system.

J. S. Dennis, C.E., Calgary, Alta., assistant to the Second Vice-President C.P.R., has been elected Second Vice-President of the Canadian Irrigation Association, organized at Calgary.

Mary, the 13-year-old daughter of G. Trites, Intercolonial Ry. section foreman, Painsec Junction, N.B., was killed by a flash of lightning while closing a window in the house, July 9.

Mrs. Wanklyn, wife of F. L. Wanklyn, Vice-President and Manager Dominion Coal Co., and daughter of R. B. Angus, Director C.P.R., died in Montreal July 14, following an operation for appendicitis.

G. C. Allen, General Baggage Agent Intercolonial Ry., has returned to Moncton, N.B., from Portland, Me., where he attended the American Association of General Baggage Agents' annual meeting.

S. W. Foster, President Orford Mountain Ry., was entertained at dinner at Mansonville, Que., by the residents, July 12, upon the opening of the recently completed extension of the line to that place.

Admiral Yamamoto of the Japanese navy, who returned to Japan via Canada, was the guest of Sir Thos. G. Shaughnessy, President C.P.R., at Montreal, July 16. He travelled to Vancouver, B.C., in a C.P.R. private car.

P. S. Archibald, C.E., Moncton, N.B., General Manager Elgin and Havelock Ry., is one of the provisional directors of the New Brunswick Publishing Co., which has just been incorporated, with offices at St. John, N.B.

W. H. Sleep was presented with a travelling case by the employes of the G.T.R. shops, Point St. Charles, Montreal, recently, on leaving to take up the position of master blacksmith at the C.P.R. Angus shops, Montreal.

Jas. Barnes, who has been sworn in Minister without portfolio in the New Brunswick Government, is President of the James Barnes Construction Co., and was the contractor for building the New Brunswick Coal and Ry. Co.'s line.

Thos. Tait, Chairman of the Railway Commission of Victoria, Australia, after an absence from Canada of four years has been visiting relatives in Montreal and Toronto, recently. He sails from Vancouver, B.C., for Melbourne, Aug. 16.

Jas. Hardwell, Chief Traffic Officer Board of Railway Commissioners, underwent a somewhat serious operation at the Protestant General Hospital, Ottawa, early in July. He has suffered a good deal of pain since, but at our last advice he was making progress towards recovery.

F. M. Hamel, City Engineer of Hull, Que., died at Ottawa, July 4. For a number of years he was engaged in the Dominion Government service in connection with the Intercolonial Ry., and in later years in connection with the harbors of the St. Lawrence and the Great Lakes.

B. C. Gesner, one of the Galena-Signal Oil Co.'s experts, who has his headquarters at Moncton, N.B., was admitted to the Royal Victoria Hospital, Montreal, on June 8, and early in July underwent an operation. It is hoped that he will be able to leave the hospital early in Aug.

W. R. Baker, assistant to the President, C.P.R., was presented with a silver and gold bowl by Prince Fushimi, on the latter leaving Vancouver for Japan. Mr. Baker was in charge of the Prince's party when it was travelling on the C.P.R. lines, as representative of the company.

Application has been made in the Surrogate Court at Ottawa for letters of administration of the estate of the late Hon. A. G. Blair. The inventory shows an estate of the gross value of $375,652, made up of personalty, $355,062; realty, $10,601; against which there are liabilities of $198,288.

Jas. MacBeth, Master Car Builder, New York Central Rd., died at Buffalo, N.Y., after an operation, July 6. He was apprenticed in the shops of the old Great Western Ry., Hamilton, Ont., in 1855, and left that company's service in 1864 to become foreman of the N.Y.C. shops at Syracuse, N.Y.

J. M. Graham, Vice-President of the Erie Rd., who has been given the honorary degree of Doctor of Engineering by the Kentucky State College, is a former resident of Winnipeg. During his residence there (1888-1890) he was General Manager and Chief Engineer Northern Pacific and Manitoba Ry.

J. H. Thompson, the G.T.R. conductor who was sentenced to three years' imprisonment for a violation of the railway rules, resulting in the wrecking of his train, has been granted a pardon, and was released from the penitentiary, Kingston, Ont., July 13, after having served one month of his sentence.

Sir H. Montague Allan, H. A. Allan, C. M. Hays, C. R. Hosmer, Montreal; T. Long, Toronto, and J. B. Allan, Boston, Mass., have been elected directors of the Merchants' Bank of Canada. J. B. Allan, who is a brother of Sir H. M. Allan (re-elected President) is a new director, taking the place of the late J. P. Dawes, of Montreal.

E. D. MacKenzie, who was Canadian Freight Agent of the Pennsylvania Rd. in Toronto, from June 1, 1901, was presented with a loving cup by the transportation men with whom he was associated, June 28, on the occasion of his removal to Oil City, Pa. M. H. Brown, General Freight Agent, C.P.R., presided and the presentation was made by D. D'E. Cooper, Canadian Freight Agent, Lehigh Valley Rd. Mr. MacKenzie is now proprietor of the Arlington Hotel, Oil City, Pa.

R. W. Bishop, resident engineer, C.P.R., Ottawa, Ont., was born at Owen Sound, Ont., March 18, 1884, graduated from Royal Military College, Kingston, Ont., June 24, 1903. Entered C.P.R. service July 8, 1903, as rodman. Served as rodman on location, construction and maintenance of way to Aug., 1904. as transitman and Assistant Resident Engineer, Sept. 1, 1904, until Aug. 31, 1906, at Ottawa. Appointed Resident Engineer at Ottawa for district 4, Eastern Division, Sept. 1, 1906.

D. Pottinger, General Manager Canadian Government railways was married at Moncton, N.B., July 17, to Mrs. M. L. Reed. In connection with Mr. Pottinger's marriage the officials and employes of the road had arranged to present a testimonial to him as a token of the esteem of the whole service. Subscriptions were to have been entirely voluntary and the testimonial promised to be a very valuable one. But the proposition came to Mr. Pottinger's knowledge, and he intimated that though he appreciated very highly the feeling prompting the presentation, he felt

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that in his position it would not be right to accept it, and he desired that the proposition be dropped.

H. R. Charlton, whose portrait appears on the first page of this issue, was born Feb. 6, 1866, and after some three years' newspaper work at St. John's, Que., was engaged on railway survey work in 1883 and 1884 on the Waterloo and Magog Ry.; he was engaged in commercial pursuits in St. John's, Que., until 1887, when from Feb. to June he was engaged with the C.P.R. travelling exhibition car, and after four years' newspaper work was given charge of the C.P.R. advertising department in April, 1891, remaining there until April, 1896, when he again went into private employ. In Jan., 1898, he was appointed to his present position as advertising agent of the G.T.R.

O. F. French, who has been appointed Chief Engineer, Railways, Telephone and Telegraph Department, Manitoba Government, Winnipeg, is a native of Ohio, and is the son of a Canadian, born in the Eastern Townships of Quebec. After completing his course as an electrical engineer in 1898, he entered private employ in Cleveland and was engaged in the construction of telephone lines in Ohio, Eastern Indiana and Michigan; in 1890 he was appointed Superintendent of Equipment and Assistant General Manager of the Federal Telephone Co., and from 1903 to July, 1906, he was General Manager of the Cuyahoga Telephone Co., Ohio. Latterly he has been engaged with a construction company in the U.S.

W. H. H. Willis, who has been appointed acting Canadian Freight Agent, Pennsylvania Rd., at Toronto, was born at St. Michaels, Talbot County, Maryland, Aug. 22, 1872. Entered Pennsylvania Rd. service, transportation department, Bolton freight station, Baltimore, Md., Nov. 1, 1894; transferred to district freight solicitor's office, Washington, D.C., June 1, 1895; transferred to general freight department, Philadelphia Pa., May 8, 1898; appointed freight solicitor Pennsylvania Rd. and Star Union Line, Philadelphia, Dec. 1, 1901; appointed agent Pennsylvania Rd., Anchor Line, Baltimore, Md., Feb. 1, 1903; appointed special agent freight department, Pittsburg, Pa., Feb. 15, 1905; appointed acting Canadian Freight Agent, Toronto, July 1, 1907; entire service with Pennsylvania Rd.

W. Wainwright, who has been appointed Fourth Vice-President G.T.R., was born in Manchester, Eng., April 30, 1840, and entered railway service Jan., 1858, with the Manchester, Sheffield and Lincoln Ry. (now the Great Central Ry.), Manchester, serving successively as junior clerk Chief Accountant's office, senior clerk in same office, and secretary to Assistant General Manager and General Manager. In 1862 he joined the staff of the G.T.R., serving one year as senior clerk in Accountant's office; three years as Managing Director's Secretary; six years as senior clerk to Managing Director and in charge of the car mileage department; eight years and five months General Passenger Agent; May, 1881, to Jan., 1891, Assistant Manager; Jan., 1891, to May, 1896, Assistant General Manager; April, 1883, to Sept., 1895, also General Manager North Shore Ry.; May, 1896, to date of present appointment, General Assistant; Dec., 1900, to date, also Comptroller.

H. G. Kelley, who has been appointed Chief Engineer G.T.R., was born in Philadelphia, Pa., Jan. 12, 1858, and entered railway service 1881, since which he has been consecutively: 1881 to 1884, Assistant Engineer on location, construction and bridge construction Northern Pacific Rd., Western and Pacific Divisions; 1884 to 1887, engaged in mining; 1887 to Jan., 1890, Resident Engineer and Superintendent of Bridges and Buildings, St. Louis Southwestern Ry. System, including the St. Louis Southwestern Ry. of Texas; Jan., 1890, to Mar., 1898, Chief Engineer same road; Mar., 1898, to date of present appointment, Chief Engineer Minneapolis and St. Louis Rd.; July, 1900, to date of present appointment, also Chief Engineer Iowa Central Rd.; Mar., 1898, to Mar., 1899, also Consulting Engineer St. Louis Southwestern Rd. He is a member of the Institute of Civil Engineers of Great Britain, and of the American Society of Civil Engineers, and has served for two terms as President of the American Railway Engineering and Maintenance of Way Association.

Joseph Hobson, who has been appointed Consulting Engineer G.T.R., was born at Guelph, Ont., 1834, and entered railway service in 1858, since which he has been consecutively to June, 1860, assistant engineer G.T.R. construction west of Toronto, and subsequently assistant engineer on various lines in Nova Scotia, Ontario, and Michigan; June, 1869, to April, 1870, engineer construction Wellington, Grey and Bruce Ry.; April, 1870, to Nov., 1873, resident engineer International Bridge, Buffalo, N.Y.; Nov., 1873, to June, 1875, chief assistant engineer Great Western Ry.; June, 1875, to Feb., 1896, Chief Engineer same road; (during this period the G.W.R. was absorbed by the G.T.R.); Feb., 1896, to date of present appointment, Chief Engineer G.T.R. System. He was the Chief Engineer in charge of the construction of the St. Clair Tunnel between Sarnia, Ont., and Port Huron, Mich.; is a member of the Institute of Civil Engineers, London, Eng.; of the American Society of Civil Engineers, of the Canadian Society of Civil Engineers, and is an Ontario and Dominion Land Surveyor.

Orders by the Railway Commissioners.

The following orders have been issued by the Railway Commissioners:

3190. June 11.—Extending time for approval of tariffs of tolls of express companies to Nov. 1, 1907.

3191 to 3193. June 14.—Bell Telephone Co.'s crossings over various railways.

3194. June 18.—Approving location of Grand Trunk Pacific Ry. mileage 52.998 to 83, Alberta.

3195. June 6.—Approving reconstruction of Port Hope viaduct, G.T.R.

3196. June 18.—Authorizing C.P.R. to construct spur to Canada West Coal and Coke Co.'s premises, Taber, Alta.

3197. June 18.—Authorizing C.P.R. to construct spur to King lumber mills, Yahk, B.C.

3198. June 18.—Authorizing C.P.R. to construct spur to Dominion Bridge Co.'s premises, Toronto.

3199. June 18.—Authorizing C.P.R. to construct spur to Kimberley Milling and Manufacturing Co.'s premises, East Kootenay, B.C.

3200. June 18.—Approving location of C.P.R. Bulyea branch.

3201. June 14.—Ordering G.T.R. to furnish by Oct. 1, plans and profiles of all highway crossings by its railway in each city, town and village in Canada, together with particulars of the nature of the crossings and the nature of the protection, if any, afforded at level crossings.

3202. June 19.—Authorizing C.P.R. to construct additional spur from the spur already constructed to McCulloch & Herriott's mill, Souris, Man.

3203. June 14.—Bell Telephone Co.'s crossing over G.T.R. near Glassford.

3204. See page 581.

3205. June 20.—Authorizing Brandon, Saskatchewan and Hudson's Bay Ry. Co. to appoint W. P. Kenny, St. Paul, Assistant Traffic Manager, to prepare and issue tariff of tolls, etc.

3206. June 20.—Approving revised location of Vancouver, Victoria and Eastern Ry. between Hedley, B.C., and lot 2680.

3207. June 19.—Authorizing Grand Trunk Pacific Ry. to cross Canadian Northern Ry. in parish lot 120, Portage la Prairie, Man.

3208. June 20.—Bell Telephone Co.'s crossing over C.P.R. at George St., Peterboro, Ont.

3209. See page 581.

3209a. to 3215a. June 20 and 25.—Bell Telephone Co.'s crossings over various railways.

3216. May 22.—Authorizing C.P.R. to cross by overhead bridge the James Bay Ry. spur in Parry Sound, Ont.

3216a. June 25.—Bell Telephone Co.'s crossing over G.T.R. near Carp, Ont.

3217. June 19.—Ordering G.T.R. to keep day and night watchmen at Kent and Lindsay St. crossings, Lindsay, Ont.

3217a, 3218a. June 25.—Bell Telephone Co.'s crossings over various railways.

3218. May 22.—Ordering Michigan Central Ry. Co. to construct and maintain its portion of level highway crossing from its rails to the G.T.R. rails, Bertie tp., Ont.

3219, 3220. June 25.—Bell Telephone Co.'s crossings over various railways.

3221. June 21.—Authorizing Grand Trunk Pacific Telegraph Co. to erect its wires across the C.P.R. Brookdale branch at G.T.P. mile post 62.75.

3222. June 27.—Authorizing G.T.R. to construct and operate a service track between Queen St. and Carlaw Ave., Toronto.

3223. June 24.—Ordering G.T.R. to raise overhead bridge at Hyde Park, Ont. to the statutory height of 22½ ft.

3224. June 27.—Authorizing Walkerton and Lucknow Ry. to construct its railway across certain streets in Walkerton, Ont.

3225. June 27.—Approving location of Central Ontario Ry. station at Bird's Creek, Ont.

3226. June 26.—Ordering G.T.R. to reopen and maintain its Fort Erie station at Amigari, Ont.

3227. June 24.—Authorizing C.P.R. to open for carriage or traffic portion of Sudbury-Kleinburg Branch, from Craighurst to Bala, Ont.

3228. May 20.—Bell Telephone Co.'s crossing over C.P.R. at siding leading to Ogilvie's flour mill, Winnipeg, Man.

3229. June 21.—Authorizing town of Berlin, Ont., to lay a water main under G.T.R. tracks at Wilmot St.

3230. May 23.—Authorizing village of Beaverton, Ont., to construct King St. and Victoria St. across the G.T.R. Lake Simcoe spur at Beaverton, Ont.

3231. June 27.—Authorizing Toronto, Hamilton and Buffalo Ry. to construct a branch line in Hamilton to Canadian Westinghouse Manufacturing Co.'s premises.

3232. June 27.—Amending order of railway committee re providing of gates and watchmen at Bay St. crossing, Toronto, by G.T.R. and C.P.R.

3233. June 29.—Authorizing C.P.R. to construct spur to Empire Brewing Co.'s premises, Brandon, Man.

3234. May 7.—Authorizing Grand Trunk Pacific Telegraph Co.'s crossing over C.P.R., Miniota branch, tracks between Forrest and Varcoe, Man.

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3235. May 7.—Authorizing Grand Trunk Pacific Telegraph Co.'s crossing over C.P.R. tracks at West Fort William, Ont.

3236. July 3.—Ordering adoption and use at crossing of G.T.R. by C.P.R. in Yarmouth tp., of an interlocking and derailing plant, signal system and all necessary appliances, one-half cost to be borne by each company.

3237. June 29.—Authorizing Great Northern Ry. (U.S.A.) to restore a commodity rate on vegetables from St. Paul and Duluth to Winnipeg, Man., upon one day's notice.

3238 and 3239. See pages 589 and 565.

3240. July 2.—Ordering Michigan Central Railroad Co. to construct a suitable farm crossing on the east half of lot 11, con. 5, tp. of Brooke, Co. of Lambton, for George White, of Inwood, Ont.

3241. See page 581.

3242. July 3.—Authorizing National Transcontinental Ry. Commissioners to cross C.P.R. tracks near St. Basile, Que.

3243. June 4.—Authorizing Grand Trunk Pacific Ry. to take certain lands owned by J. K. Richardson.

3244. July 4.—Authorizing Department of Public Works to cross at rail level with a proposed wharf C.P.R. tracks opposite Pembroke, Ont.

3245. See page 577.

3246. May 1.—Approving of alterations in grade and other changes in connection with the G.T.R. second track between Brantford station and one mile east of Alford station, Ont.

3247. July 3.—Bell Telephone Co.'s crossing of G.T.R. at Cherry St., Toronto.

3248. July 5.—Authorizing Canadian Northern Ontatio Ry. to take portions of lots 23 and 24, on plan 64, Parry Sound, Ont., for diverting Great North Road to avoid crossing by the right of way of the highway.

3249. See page 581.

3249a. July 5.—Authorizing St. Mary's and Western Ontario Ry. to cross the G.T.R. right of way by a subway about 3,500 feet south of the G.T.R. station at St. Mary's, Ont.

3250. June 22.—Approving general certificate of concurrence in joint tariffs of international express freight rates.

3251. See page 581.

3252. July 3.—Sanctioning agreement by which C.P.R. leases Walkerton and Lucknow Ry.

3253. June 25.—Ordering Atlantic and Lake Superior Ry. Co. to construct a station at St. Omer, Que., on its line between Nouvelle and Carleton.

3254. July 5.—Authorizing Georgian Bay and Seaboard Ry. Co. to join its track near Coldwater, Ont., with the C.P.R. Sudbury-Kleinburg Branch.

3255. July 3.—Authorizing Canadian Northern Ontario Ry. to cross the C.P.R. near Wahnapitae station, Ont.

3256. July 3.—Authorizing Walkerton and Lucknow Ry. to cross certain streets in Durham, Ont.

3257. July 5.—Authorizing C.P.R. to replace trestle over highway on east side of Rideau River near Merrickville, Ont., with permanent steel bridge.

3258. July 6.—See page 567.

3259 to 3261. July 9.—Bell Telephone Co.'s crossings over various railways.

3262 to 3268. July 9.—Authorizing Vancouver, Victoria and Eastern Ry. to cross Mt. Lehman Road near mile post 55. Autier's Road, near mile post 52. Yale Wagon Road, mile post 54. Clearbrooke Road, near mile post 53. Aberdeen Highway, near mile post 58. Ross Road, near mile post 56, and Nascoe Road, near mile post 59.

3269. July 9.—Authorizing Brantford and Hamilton Electric Ry. Co. to cross G.T.R. right of way and tracks near Cainsville, Ont., by a subway.

3270. July 9.—Authorizing C.P.R. to construct spur line to Superior Portland Cement Co.'s premises, Orangeville, Ont.

3271. July 9.—Authorizing Central Ontario Ry. to construct bridge across Papineau River between Bancroft and Whitney.

3272. June 15. Authorizing Chatham, Wallaceburg and Lake Erie Ry. Co., to carry its line upon, along and across certain highways in Chatham, Ont.

3273. July 8.—Approving location of Orford Mountain Ry. from Potton Line to Mansonville, Que.

3274, July 9.—Authorizing Orford Mountain Ry. to open for traffic its line from Potton Line to Mansonville, Que.

G.T.R. Betterments, Construction, Etc.

Montreal Track Elevation.—Plans have been submitted by the G.T.R. to the Montreal City Council Committee, for the abolition of level crossings in the city, by the elevation of its lines. The cost of the project is estimat- at $5,000,000, of which it is proposed that one-half shall be borne by the city. The closing of several streets is desired by the company, and to this the committee is opposed. Negotiations are in progress with a view of some modification being agreed upon.

Ottawa Division.—The new roundhouse, coal chutes and turntable at Madawaska have been completed. Extensive dock improvements have been authorized at Depot Harbor, where a new coal plant will also be installed, and the trestle east of the terminus will be filled in. New trestles and bridges are to be put in on the Pembroke Southern Ry. (a leased line), and other improvements made.

Toronto Junction Station.—A permit has been issued for the erection of a new station, to cost $2,500, at Toronto Junction, Ont. It is to be of brick, 65 by 28 ft.

Hamilton.—The officials at Hamilton, Ont., have been informed that the company has options on three sites in the city, in connection with the proposals to erect an improved passenger station there. The sites are: on the main line between Bay and Hughson streets; on Ferguson Ave., near the jail; and the site of the present King St. station.

St. Mary's Station.—The plans for the new station to be built at St. Mary's, Ont., provide for a structure 92 ft. in length; to be built of brick, with a cement platform. The general waiting room will be 50 by 20 ft., and the building will provide all modern arrangements for the convenience of the company's officials and the public.

London Improvements.—A train service over the new elevated tracks between London and Hyde Park, Ont., was put on June 28. This work, which has been in progress for over two years, cost about $1,000,000. By its completion one of the steepest gradients on the line has been removed. At one point the new track is 30 ft. above the level of the old, while at another point, near Hyde Park, five miles west of the city, the tracks had to be lowered 20 ft. The question of the elevation of the tracks in London city is still in abeyance, but it is expected that some further action will be taken in a short time with a view of resuming the negotiations broken off a few months ago.

St. Clair Tunnel.—Satisfactory progress is reported as being made upon the installation of the machinery for the operation of the trains through the tunnel between Sarnia, Ont., and Port Huron, Mich., by electricity.

St. Lambert-St. Antoine.—Application is being made to the Board of Railway Commissioners for an order authorizing the construction of a branch line from near St. Lambert on the line to Rouse's Point, to a point on lot 246, St. Antoine de Longueuil, Que., on the line to Portland, Me.

Canadian Northern Ry. Construction, Etc.

St. John Valley Ry.—Ex-Premier Pugsley, of New Brunswick is quoted as having stated that Mackenzie, Mann & Co. have received a report from their engineer as to the route of this projected line along the St. John River valley, to St. John, N.B. The route suggested will cross a corner of Maine, but Mr. Pugsley says it will be the shortest route between Quebec and a winter port.

Canadian Northern Quebec Ry.—Construction is being progressed with at a satisfactory rate on the line between Garneau Jct. and Quebec, and tracklaying is in progress. It is expected that much of the tracklaying will have been completed by the end of the year, and that the line will be fully completed and ready for operation by June, 1908. Work is being pushed between Lorette and Cap Rouge, where the road connects with the National Transcontinental Ry. The greater portion of the right of way between Quebec and the bridge terminals has been secured, most of the proprietors having come to terms with the company, while the rest will have their claims settled by arbitration.

Z. A. Lash, K.C., wrote recently to the Mayor of Quebec, stating that D. D. Mann, Vice-President, authorized him to state that the report that the company proposed to erect locomotive and car shops at Montreal, had its foundation in the fact that the company had decided to erect divisional repair shops there. Further, as soon as the direct line from Garneau Jct. was completed into Quebec it was the intention of the company to establish new shops in or near the city for the C.N.Q. Ry. and the Quebec and Lake St. John Ry., closing this latter company's present shops, and using the site for terminal purposes. The details of the plans had not yet been considered.

Canadian Northern Ontario Ry.—Some trouble is being experienced at different points of the line between Hawkesbury and Ottawa, in the way of getting the right of way. The track between Hawkesbury and Rockland was expected to be laid by June 30, and the contractor stated that if possession of the right of way could be obtained there would be no difficulty in having track laid to Ottawa by Sept. No formal decision has been announced regarding the entrance of the company's line into Ottawa, but it is thought that a junction will be made with the G.T.R.

H. J. Wicksteed, C.E., and J. B. Tyrrell, mining engineer, have been for some time in the Larder Lake mining district of Ontario on behalf of Mackenzie, Mann & Co. There has been some talk of the construction of a branch of the C.N.O. Ry. into the Cobalt and Larder Lake district; and the Quebec and Lake St. John Ry., controlled by Mackenzie, Mann & Co., is interested in the development of the mineral district of Quebec, of which the Larder Lake field forms a part.

The company's line from Sudbury has been completed to the Moose Mountain mines in Hutton tp., about 30 miles northerly. The mines are being developed and the ore will be taken by rail to Key Inlet and shipped to Midland, Hamilton and U.S. points.

Canadian Northern Ry.—A contract was reported let, July 18, for the construction of the erecting shop at the new shops at Fort Rouge, Winnipeg. The main building will be 600 by 160 ft., and there will be several annexes. The contract, which has been given to Kelly Bros. & Mitchell, calls for the completion of the work by Dec.

The Premier of Manitoba informed a deputation July 9, that W. Mackenzie, President C.N.R., authorized him to say that the company would build a station at Oak Point, prepare roadbed and construct an extension from Oak Point at least to Lundar, Man., this year. On July 15, Mr. Mackenzie

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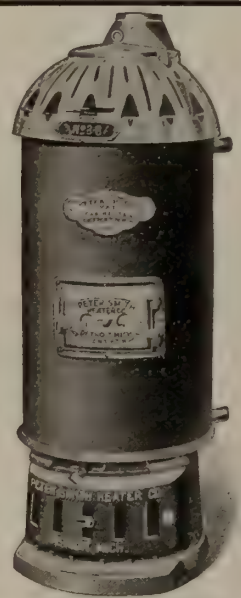

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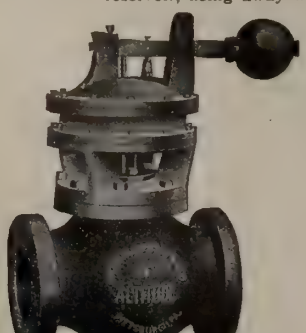

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arrived in Winnipeg on a trip of inspection, and in an interview stated that the company did not at present contemplate any further extension in the west.

W. Mackenzie had a consultation with the Premier of Saskatchewan at Regina, July 18. It was subsequently announced that an effort would be made to have the line between Brandon, Man., and Regina, completed this fall. The arrangements for securing the route into Regina were expected to be completed within a few days.

The President also visited Saskatoon, on the Prince Albert line. The company at this point purposes to build a passenger station on First Avenue, to cost $40,000. The freight shed will be located on First Avenue, north of Twentieth Street. A roundhouse will also be built. Large extensions will be made in trackages. Tracks will be laid close to and parallel with Avenue A, and First Avenue, extending farther north than any of the present switches. Switches and side tracks will be laid to important warehouse locations.

The extension of the line from Stoney Plain to White Whale Lake, Alta., 18 miles, was expected to be completed by July 20.

President Mackenzie returned to Winnipeg July 21, after having completed an inspection of the line. He said: "We are putting in additional roundhouse accommodation at Portage la Prairie and Dauphin. We are making quite large improvements at Dauphin. We are putting up freight sheds at Humboldt, Vermilion and Vegreville, and new stations at Dalmeny, Borden, Lachburn and Lamont. On the main line we are doing a lot of ballasting and roadbed improvements of all kinds. We are erecting a new station and making yard improvements at Brandon. We are building the main line very rapidly between Brandon and Regina, and have 60 miles of track laid already. On the Prince Albert line we are putting up a new station, roundhouse and shops at Saskatoon, and rearranging the yards there. We are enlarging our freight-shed accommodation, having them in separate places. We are putting together the facilities of our Regina and Prince Albert line, and our old line running from the east, instead for having them in separate places. We are putting in roundhouse facilities at the junction for the Hudson Bay line. On the Regina-Prince Albert line we are taking out heavy grades of one and one-quarter, and reducing them to six-tenths. We are putting in a new station at the junction of the Prince Albert line and the Hudson Bay line. We are doing a lot of work on the line between here and Port Arthur. We are replacing with a new station the one burned at Beaudette. I find the road better every time I pass over it. Gangs of men are engaged in ballasting, filling, etc. In Fort Rouge the roundhouse is about completed, and the shops are well under way."

Press reports state that the G.T.R. is to buy 100 locomotives within the next two months; that the G.T. Pacific Ry. is about to buy 50 eight-wheel locomotives, and that the Central Vermont Ry. is figuring on ten locomotives.

G. Marconi returned to England, sailing by the Allan Line S.S. Victorian, July 19. He stated that the experiments he had been conducting at Glace Bay, N.S., had been even more successful than he had anticipated. He expected to return in a few weeks to complete the work at the station, when he said the problem of speedy and uninterrupted communication across the Atlantic Ocean will have been solved. He also spoke of establishing communication between Glace Bay and Vancouver, B.C., by way of the Arctic Ocean.

National Transcontinental Railway.

The Commissioners have awarded a contract for 44,000 tons of steel rails to the Dominion Iron and Steel Co., and for 21,371 tons to the Algoma Steel Co.; delivery to commence in Nov., and be completed in 1908. The Commissioners have let a contract to the Dominion Bridge Co. for five steel bridges for the line in Eastern Quebec. The Commissioners have under consideration four tenders for the construction of the line from Chipman eastwards to Moncton, N.B. The contractors tendering are: M. J. O'Brien and Q. J. Fowler, Ottawa; Grand Trunk Pacific Ry. Co., Montreal; Willard Kitchen Co., Fredericton, N.B.; J. W. McManus Co., Memramcook, N.B.

Press reports state that M. P. and J. Davis have sublet the greater part of the 150-mile section between Quebec Bridge and the New Brunswick boundary, the sub-contractors being: Pocock and Lemay, Cameron and Perrego, Johnston and Sabiston, Beauregard and Dufour, McDougall Bros., Murdoch Bros., R. Ryan and A. McGougan. The latter will construct bridges over the Etchemin and Abenaquis rivers. The G. T. Pacific Ry. Co. has sublet the clearing of the right of way on the Abitibi section to Rogers and O'Brien, of Montreal. With respect to the 275-mile section from Winnipeg easterly to Lake Superior Junction, H. D. Lumsden, Chief Engineer, stated recently that the contractors had 4,000 men at work, and very poor progress was being made. He thought that a great deal of work could be done during next winter, but he would not care to say that this section of the line would be completed by the spring.

Owing to forest fires in Ontario east of the Manitoba boundary, J. D. McArthur, contractor on the Winnipeg-Superior Junction section, has suffered considerable damage. The loss at the Vermillion Bay storehouse is estimated at nearly $30,000. Camps at other points have been damaged to some extent.

GRAND TRUNK PACIFIC RAILWAY.

The Board of Railway Commissioners held a sitting at Fort William, Ont., July 8, when a considerable amount of evidence was submitted with respect to the proposed route into that place. Tracklaying has been in progress for some time on the Lake Superior branch, and construction trains have been operated out of Fort William for several miles. It is expected the track will have been laid for about 100 miles by the end of the season

After a sitting extending over several days, at Winnipeg, the Chief Commissioner announced, July 13, that the board would approve of the present location of the G.T.P. to Cambridge St. from the city terminal, southeastward along Woodward Ave., and then passing across Cambridge St. diagonally through Cowper Ave. and the lots projected to the north of the Canadian Northern Ry. track, to the Oak Point Junction of the C.N.R. and C.P.R., then the track would parallel the C.N.R. past the Agricultural College Farm, missing it, and the Tuxedo Park estate, and thence as located to the westward. Their opinions for that decision would be put in writing, but the main point which determined them to make that ruling was that their Chief Engineer, who was supported by other engineers who had been heard, thought the crossing at the Oak Point Junction the most desirable operation from the point of view of railway construction. With regard to the crossing of Main St. at the triangular spot made by the street and rivers, the order would be subject to an order requiring a level crossing at the point. With regard to the crossing of highways by the railway they were not satisfied that all the streets shown on the plan before them were dedicated highways, or merely paper streets, but he had no doubt arrangements could be made for the closing of some of the streets and crossings at others.

Grading was started at Portage la Prairie, Man., July 16, on the section of the line into Winnipeg. The contractors are Trent and Johnson, Winnipeg, and the work is to be completed by Nov. F. A. Connor has a subcontract for grading at Portage la Prairie.

West of Portage la Prairie the company has a considerable mileage of track laid, and, June 28, hauled three cars of grain from Sydney to Portage la Prairie.

C. Schreiber, Consulting Engineer to the Dominion Government, returned to Edmonton, Alta., July 2, from a trip of inspection over the projected route to Yellowhead Pass, 230 miles. On reaching Winnipeg, he went out to Portage la Prairie and inspected the work in progress to Saskatoon, from which point he returned to Ottawa, July 19. He states that the trail from Edmonton to the Yellowhead Pass was the worst he had ever travelled over, owing to the weather; the mountain torrents made the travelling exceedingly difficult and dangerous. An excellent line, however, is being located through the Pass. In regard to construction, he said: "The grading will be completed to Edmonton before the snow flies. It is expected that the tracks will be laid westward from Portage la Prairie for 400 miles, and also from Portage la Prairie into Winnipeg. Much more than this could be accomplished but for the scarcity of ties."

The G. T. Pacific Ry. Co. has paid out $50,000 to the Indians at Metlakahtla, B.C., who have lands surrounding Prince Rupert, as part payment for their interest. The work of laying out the subsidiary terminals at Kitamaat, B.C., are being proceeded with These terminals and this branch line are being constructed, J. H. Bacon, the company's engineer at Prince Rupert, says, in order to comply with the agreement with the B.C. Government.

A Victoria, B.C., despatch states that 3,000 Japanese are being brought to B.C. by the G.T. Pacific Ry. Co. for construction work in B.C.

W. H. Black, heretofore secretary to the President of the Bell Telephone Co., has been appointed Secretary of the Company, and W. G. Slack, heretofore accountant, has been appointed Treasurer.

The Bell Telephone Co. has purchased a block of land at the corner of St. Joseph Boulevard and Cadieux St., Montreal, at a cost of $50,000. This will be used for the erection of a north end exchange at a cost of about $200,000. The new exchange will relieve the present eastern exchange of a portion of its territory.

The C.P.R. placed the following orders for rolling stock, between June 14 and July 12, at its Angus shops, Montreal: 3 switching locomotives, 3 first-class cars, 2 colonial cars, 1 mail and express car, 143 box cars, 74 flat cars, 21 stock cars, 22 fifty-ton steel ore cars, 3 Hart ballast cars, 2 freight refrigerator cars, 1 business car for Superintendent, 4 double-track snow plows, 6 wing snowplows; at its Farnham, Que., shops, 60 vans.

L. B. McFarland, General Manager Bell Telephone Co., returned to Montreal from Winnipeg July 17. He stated that labor troubles are preventing the going on with improvement work at Winnipeg. Plans are in course of preparation for new exchanges in the northern and western districts of Winnipeg, which will give four exchanges in the city, and provide for a total of 40,000 subscribers. The company was also planning to open a large number of new exchanges throughout Manitoba, Saskatchewan and Alberta.

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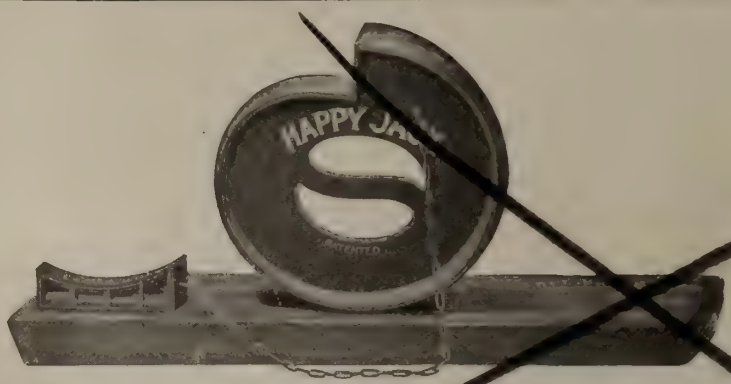

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Too Late for Classification.

Atlantic and Pacific Ocean Marine.

The Allan Line S.S. Corsican arrived in Quebec on her first voyage from Liverpool, July 20.

A. Piers, Manager C.P.R. steamships, stated on his return to Montreal, July 19, that the company had decided to build a new Empress steamship for the Pacific ocean service. The plans were in preparation and construction will be started at an early date. The new steamship, which will be built on the Clyde, Scotland, will be larger and faster than the three Empress steamers which the company is now running between Vancouver and Hong Kong.

The Department of Marine has had the following lightships supplied with submarine bell signals: Lurcher, Anticosti, Red Island, White Island, Prince Shoal, and at the Chebucto Head shore station, N.S. The signalling apparatus has also been installed at Yarmouth, Louisburg, N.S., and Negro Head, N.B. This work has been done by the Submarine Signal Co., Boston, Mass., which will also instal submarine bells in a number of automatic buoys for the Department as soon as it can supply a suitable bell attachment for the same.

Capt. Walsh, Marine Superintendent of the C.P.R., recently paid a visit to Three Rivers, Que., and has reported on the accommodation there for ocean-going steamers, which at present consists of a wharf 2,018 ft. long, and from 200 to 300 ft. wide, with a depth of 30 ft. of water alongside at low tide. The C.P.R. has a spur line connecting with the wharf. The city has offered the company 145 acres for a stockyard, etc. A. Piers, Manager of the C.P.R. steamships, is quoted as stating that the conditions at Montreal and Quebec are not satisfactory, but a thorough investigation of the possibilities at Three Rivers would have to be made before any change could be decided upon.

Sir Wilfrid Laurier, in an interview on his return to Canada, July 19, referred to the all-red line proposal. He said: "This means that the different parts of the Empire wish to share the advantages Providence has given them, in which Canada plays no small part. We occupy a unique position as the gateway between Europe and the Orient. My proposition, which was adopted by the conference, was the establishment at once of fast boats on the Atlantic and Pacific, which would bring the east and west of the Empire into close connection through Canada. This prospect is a vast one, which demanded much thought. A Montreal newspaper announced that the English Premier had decided to oppose it. I do not believe that Sir H. Campbell-Bannerman had moved either way as yet, or will until the matter had been thoroughly discussed." He added that judgment on this matter should be withheld by all until, after full discussion, its value had been determined. He, however, was thoroughly convinced that his ideas were in the interest of Canada and the Empire. This plan would mean great development for the whole of Canada, and for Quebec city in particular.

Province of Quebec Marine.

The barge Havana, which was sunk by the Richelieu and Ontario Navigation Co.'s steamboat Prescott in Lachine Canal, has been raised and is being repaired at the Quebec and Levis Ferry Co.'s dock.

The Standard Coal and Shipping Co. has been incorporated under the Dominion Companies' Act, with a capital of $150,000 and offices at Montreal, to carry on the business of coal factors and merchants, and in connection therewith to acquire steam and other vessels, barges, wharves, docks, etc., and to act as forwarding and receiving agents for all kinds of goods. It is proposed to take over the business at present carried on by the Standard Coal Co. The provisional directors are: F. M. Dixon, A. Ross, A. Darling, R. E. Fyfe, A. W. Greenshields, Montreal.

Satisfactory progress is being made with the construction of the extension to the breakwater at Quebec, and the contractors, Dussault & Co., expect to have their work on the extension completed by the fall. The freight shed on the breakwater is being extended 200 ft. further northward. This addition will enable three steamships to be berthed at the breakwater and to discharge their cargoes into the shed.

Maritime Provinces and Newfoundland Marine.

The burned steamboat Crystal Stream has been offered for sale as she lies at Cole's Island, in St. John River.

R. Clint, who died at St. John, N.B., July 15, aged 80, had been engaged as a pilot for nearly 60 years, and was in active work to the time of his death.

An investigation was opened before J. F. L. Parsons, agent of the Department of Marine, at Halifax, N.S., July 15, into the circumstances attending the collision between the Rosalind and Senlac, July 1, by which the latter sustained serious injury.

B.C. and Pacific Coast Marine.

Several sites have been inspected in the vicinity of Prince Rupert, B.C., with a view of the selection of one upon which to erect a quarantine station.

The Upper Columbia Navigation and Tramway Co.'s steamboat Ptarmigan ran on a rock or other obstruction in the Columbia River between Golden and Windermere, B.C., in the fourth week in July, tearing a hole in her hull. She was beached, but fire broke out and she was sunk. The passengers, about 100, were saved. The Ptarmigan was built at Golden, B.C., in 1903, was driven by paddles, her dimensions being: length 110 ft., breadth 20½ ft., depth 4 ft.; gross tonnage, 246 tons; registered, 155 tons.

Ontario and Great Lakes Marine.

The steamboat City of New York, Kingston to Montreal, ran aground on Sparrow Hawk point, Cardinal, Ont., July 14.

The Huntsville, Lake of Bays, and Lake Simcoe Navigation Co.'s steamboat Iroquois was launched at Huntsville, Ont., July 23. She is expected to be running early in August.

The Montreal Steamship Co. has secured supplementary letters patent under the Dominion Companies' Act, by which its capital has been increased from $90,000 to $250,000.

The Richelieu and Ontario Navigation Co.'s steamboat Toronto has been fined $40 for a breach of the U.S. coasting law, by carrying four passengers from Charlotte to Alexandria Bay, N.Y.

Capt. Firby, of the G.T.R. car ferry Lansdowne on the Detroit River, has been given command of Ontario No. 1, the new car ferry steamship which is nearing completion in Toronto, and which will run between Cobourg, Ont., and Charlotte, N.Y. —. Forrest is to be chief engineer.

Elevators.

At a meeting in Winnipeg July 17, a resolution was passed favoring the establishment of an association of farmers' elevators throughout the west. A. Morrison, Carman, Man.; A. Shephard, and Dr. Wright, were appointed an organization committee.

The Ogilvie Flour Mills Co. expects to have its new 600,000 bush. elevator at Fort William, Ont., completed in time for handling this season's crop. The elevator is to be operated by electricity supplied by the Kaministikwia Power Co., from its Kakabeka Falls plant.

ELECTRIC RAILWAYS.

Projects, Construction and Betterments.

British Columbia Electric Ry.—The grading on the projected electric railway from New Westminster to Eburne, B.C., will be commenced as soon as all the right of way has been secured. It is reported at New Westminster that the contract for grading has been let to J. Bright. (July, pg. 505).

Edmonton Street Ry.—Commissioner Pace, who has charge of construction of the electric railway at Edmonton, Alta., stated that he expected it would be in running order early in Sept., 1908. The work at present in progress is the construction of 3,500 ft. of double track on Jasper Ave., which it is expected to have completed by Aug. 30. (July, pg. 505).

Hamilton, Waterloo and Guelph Ry.—Civil Engineer McCallum, who was engaged by the Hamilton City Council to make a survey for a route into the city for this projected railway, reported upon six possible routes. His instructions were to suggest the best possible route from Rock Chapel, with gradients and curvature that would permit the operation of the heaviest cars at a rate of 35 miles an hour. After detailing the various routes, with reasons for and against them, he recommends the adoption of route two. This passes along the edge of Dundurn and Harvey parks, principally on G.T.R. property, and in such a manner as not to damage the parks in any way. He estimates that this route would cost less than that proposed by the company. The report is still under consideration. J. Patterson, the promoter of the line, said even if the route were granted he would not do any construction this year on account of the state of the money market. He had all the necessary arrangements made to go on last year, but the council would not give the right of way desired. (June, pg. 427).

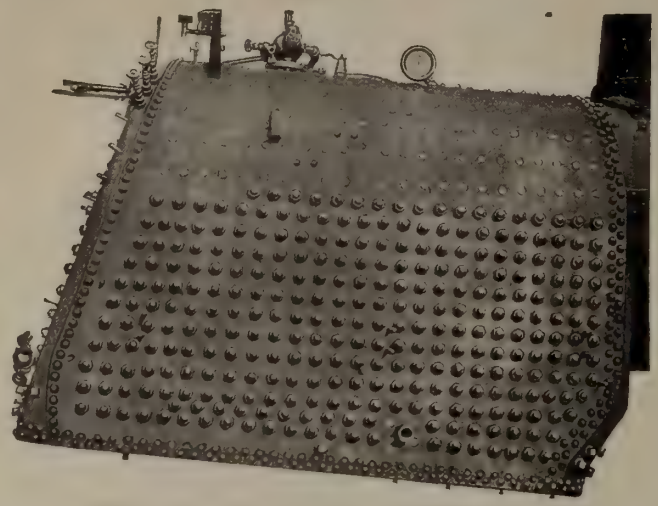
Montreal and Southern Counties Ry.—The Montreal City Council, July 8, passed a portion of the by-law allowing the M. and S.C. Ry. to establish a line of street cars on certain thoroughfares in the city. Notice has, however, been given asking for the reconsideration of the matter. (July, pg. 505).

Montreal Park and Island Ry.—The company has secured all the land necessary for the extension of its line from Lachine to Ste. Anne de Belleville, Que., and arbitrators are being appointed to fix the price for the land to be taken.

Niagara, St. Catharines and Toronto Ry.—In connection with the filling in of the trestle at Merritton, Ont., the company has constructed a large concrete arch bridge over Main St. The bridge consists of a large main arch with smaller arches on either side to allow the waste water of the old Welland Canal to pass through. The main arch has a 20 ft. rise, and is capable of sustaining a weight of 35,000 lbs. There are 1,500 cubic yards of cement in the structure and 58 steel rods, 1¼ in. in thickness, were used for reinforcing the cement. (Mar., pg. 191.)

Quebec and Saguenay Ry.—The location for this projected line has been completed from the terminus of the Quebec Ry., Light and Power Co.'s line at Cap Tourmente, to Murray Bay, Que., 56 miles. The line will follow the north shore of the St. Lawrence River all the way; the steepest gradient is 18 feet to the mile, and the sharpest curve will have a radius of 1,146 ft. There will be one bridge of 125 ft. span and three of a 50 ft. span each. The work will be gone on with during the current year. J. F. Guay is Chief Engineer. (July, pg. 505).

South-Western Traction Co.—We are advised that the company expects to have its



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line between St. Thomas and Port Stanley completed at an early date, so that a through service from London to the lake shore may be given. (Mar., pg. 191).

Vancouver and Tacoma.—Press reports from Bellingham, Wash., state that Stone & Webster, Boston, Mass., who control the Cape Breton Electric Co., have secured the complete holdings and franchises of the Everett Electric Co., and adds: "This transfer carries with it the 24 miles of road already built, with its power and suburban franchises, and assures the new long-talked of Tacoma-Vancouver line," Stone & Webster are the financial agents for the following electric power and traction companies in the state of Washington: Tacoma Ry. and Power Co.; Puget Sound Electric Rd., connecting Tacoma and Seattle; Seattle Electric Co.; Puget Sound Power Co., delivering power to Seattle and Tacoma; Whatcom County Ry. and Light Co., Bellingham; Nooksack Ry. Development, delivering power to Bellingham.

Windsor and Tecumseh Ry.—This line, which extends from Walkerville to Tecumseh, Ont., has been completed and is being regularly operated as a part of the Sandwich, Windsor, and Amherstburg Ry. (July, pg. 505).

Electric Railway Notes.

The Halifax Electric Tramway has received four new open cars.

Jas. McDonald, business agent for the Street Railway Men's Union, Toronto, has died there from pneumonia.

Mrs. A. Fraser, who died at Ottawa, June 25, aged 80, was mother of J. D. Fraser, Secretary-Treasurer Ottawa Electric Ry. Co.

Jas. Gunn, Superintendent of the Toronto Ry., returned to Toronto, July 9, after having spent some time in Great Britain, after an absence of 29 years.

The Manitoba Government has directed that an enquiry be made by a commission as to the most suitable and reliable fender to be adopted by electric railways.

The Montreal Street Ry. is asking the City Council for permission to conduct a freight service on certain lines in the city between midnight and 6 a.m. The subject will be discussed in the fall.

A by-law has been passed at Port Arthur, Ont., authorizing the purchase of additional cars for the municipal electric railway; and the construction of a second track for the same for a distance of seven miles.

J. F. Keys has been appointed General Passenger Agent, Detroit United Ry. This company owns the Sandwich, Windsor and Amherstburg Ry., and the Windsor and Tecumseh Electric Ry. in Canada.

The Hamilton city solicitor has been instructed to ask the Ontario Railway and Municipal Board to compel the Hamilton Street Ry. Co. to put more cars in operation, and to appeal against the Board's order that the city supply material in making repairs between the tracks.

The Thorold, Ont., Town Council proposes to apply to the Board of Railway Commissioners for an order respecting the issue of return tickets on the Niagara, St. Catharines and Toronto Ry. According to the statements made the company requires that return tickets be bought at the station, and as this is not always convenient, passengers between Thorold and St. Catharines have to pay 10c. each way. The town's agreement with the company provided for a return fare of 15c.

Electric Ry. Finance Meetings, Etc.

Grand Valley Ry.—The Board of Railway Commissioners, July 3, granted an order approving the amalgamation of the Brantford Street Ry., the Woodstock, Thames Valley and Ingersoll Ry., and the Grand Valley Ry., under the latter title. The order to issue upon proof being given that two-thirds of the shareholders of the companies have approved of the sale. The Brantford Street Ry. operates seven miles of line in the city of Brantford; the Woodstock, Thames Valley and Ingersoll Ry., 11.50 miles in Woodstock and Ingersoll, and connecting these towns, and the Grand Valley Ry. extends from Brantford to Galt via Paris, 23.25 miles.

Halifax Electric Tramway Co.—Car earnings for June $15,604.83, against $15,225.27 for June, 1906.

London St. Ry.—The gross receipts for 6 months to June 30 were $107,432.36, against $91,490.08 for the same period of 1906, an increase of 17.42%.

Montreal Street Ry.—Passenger earnings for June, $318,047.72; total earnings, $325,252.26; against $281,211.41 passenger, and $287,594.93 total earnings for June, 1906. Operating expenses, $175,030.77; rent leased lines, $339.96; city percentage on earnings, $27,638.33; interest on bonds and loans, $11,904.88; contingent for renewals, $15,902.39; surplus, $94,435.93; against $152,834.52, operating expenses; $22,214.61 city percentage on earnings; $15,366.32 interest on bonds and loans; $14,452.86 contingent for renewals; and $82,726.62 surplus for June, 1906. Rental of leased lines is an extra charge in the current year's accounts. Gross earnings for nine months ended June 30, $2,494,887.90; operating expenses, $1,585,598.32; fixed charges, $389,614.22; surplus, $519,675.36; against $2,193,784.97 gross earnings; $1,367,193.06 operating expenses; $319,008,36 fixed charges; and $507,583.55 surplus for the same period 1905-06.

South-Western Traction Co.—Following are the officers and directors for the current year: President, F. G. Rumball, London, Ont.; Vice-President, Dr. A. McKay, Ingersoll, Ont.; Secretary, A. E. Welch, London; other directors, Lieut.-Col. R. McEwen, Byron, Ont.; Capt. T. E. Robson, H. M. Rumball, London; General Manager, S. W. Mower, London.

Toronto Ry.—Car earnings for June $285,622.43, against $254,898.59 for June, 1906.

Telegraph operators on the Intercolonial Ry. are asking for an increase of 25% in their salaries, and a reduction of hours from 12 to 10 per day. The operators claim they have not had an increase for four years.

There have been deposited with the Secretary of State at Ottawa agreements of sale and other documents in connection with the purchase of rolling stock by the Canadian Northern Ry. as follows: With Canada Rolling Stock Co., and Rhodes, Curry & Co., Amherst, N.S.; eleven with the Imperial Rolling Stock Co.; Bristol and South Wales Railway Wagon Co. and the Imperial Rolling Stock Co.; British Wagon Co., and the Imperial Rolling Stock Co. The National Trust Co. is interested in 12 of these transactions.

The C.P.R. received the following rolling stock, between June 14 and July 12, from its Angus, Montreal, shops, 4 passenger locomotives, Pacific type; 10 sleeping cars, 12 first-class cars, 369 box cars, 133 flat cars, 88 steel coal cars, 35 Hart ballast cars, 14 fifty-ton coal cars, 2 ballast trimmers; from its Farnham, Que., shops, 10 vans; from the American Locomotive Co., Richmond, Va., 5 freight locomotives; from other U.S. points, 10 freight locomotives, 2 observation cars, 1 ditching machine; from the Locomotive and Machine Co. of Montreal, 10 freight locomotives, Pacific type.

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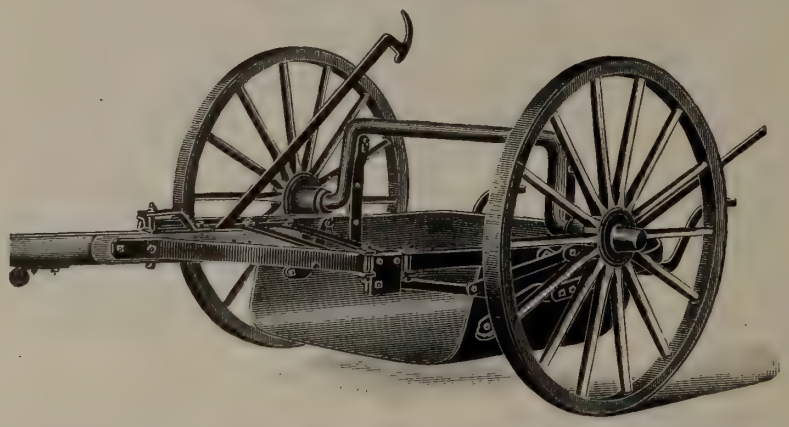

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BOSTON, MASS.

Toronto Railway Co.'s Employes.

After considerable negotiation the following agreement has been entered into between the Toronto Ry. Co. and its employes, and signed by R. J. Fleming, General Manager, for the company, and by four of the employes on behalf of the others:

This agreement made July 13, 1907, between the Toronto Ry. Co. and the committee representing the employes of the company. Whereas the parties above have met and adjusted all differences, and have recommended that the following agreement be executed. It is further agreed as follows:

That all matters in dispute between the company and the employes are hereby settled.

For the term of three years, from June 16, 1907, the following wage schedule shall be in force: Motormen and conductors for the first year, 20c. an hour; for the second year, 22c. an hour; for the third year and thereafter, 23½c. an hour. Shed men (foremen), 23½c. an hour; assistant shed men, 21c. an hour; carmakers, 20c. an hour; motor and truck repair men, for the first year, 20c. an hour; for the second year, 22c. an hour; for the third year and thereafter, 23½c. an hour.

The company will pay half the cost of uniforms of motormen and conductors who have been in the company's service for one year, and will provide free uniforms for motormen and conductors who have been in the company's service for longer than two years.

The following regulations agreed upon as to discipline: Any employe against whom charges may be brought will be required to report when off duty to the Superintendent. His case will then be considered by the proper officials of the company, and will be dealt with upon the following principle: For minor offences he is to be warned, and after a second warning for the same offence may be suspended. For serious cases, including drunkenness, drinking in uniform, or drinking on cars, destruction of property, accidents through carelessness or neglect, missing fares through neglect, or carrying friends free, using stools on portions of the route not allowed by the company, incivility to passengers and profanity upon cars, he may be suspended or dismissed at the discretion of the proper officials.

Any employe against whom any charge may be brought shall have the right of appeal in person to the General Manager, and except as to a charge of dishonesty may bring with him in his interest a committee of employes. Attendance in such capacity shall not operate to any employe's disadvantage. Any employe attending on such committee shall give due notice to his car starter or foreman, and if he be a motorman or conductor, shall take his car upon reporting to his car starter and shall not be required to report in the usual course to the head roadmaster.

The company will provide seats for motormen upon the cars, motormen to have the right to use such seats upon certain portions of the line.

Having due regard to all the conditions of the service, the manager undertakes that the schedule shall be so arranged that the hours worked on the cars will be put in within the least number of hours practicable and consistent with the service performed by the company.

It is agreed that regular and relief men as heretofore shall be paid for Sunday runs on the time schedule to them on the board for their week-day runs.

The company will on application to the car starter or foreman give leave of absence to employes for a reasonable period of time when their services can be spared, and in the event of refusal of the car starter or foreman the matter to be settled by the superintendent.

The company will not discriminate against employes by reason of their being members of any organization.

On the lines where no office of the company is passed or adjacent an official of the company will collect and exchange fare boxes at points appointed for the purpose.

It is understood that only the men in the shops required for the necessities of the service shall be compelled to work on Saturday afternoons, excepting when in the opinion of the management the services of all the men or any of them are required on Saturday afternoon to meet the necessities of the business.

Tools necessary for work in the motor shops will be supplied to employes. The men shall not take away tools from the shops and shall be responsible for breakages or loss occasioned by negligence. Men must return said tools in good condition. In default of doing so they must pay for the same.

The men in the motor shops and its branches shall be given five minutes in which to wash before leaving work, and any employe abusing his privilege shall be subject to suspension or dismissal.

The foregoing provisions shall be in force for a period of three years from June 16, 1907.

The following provisions of the agreement of May 22, 1903, are hereby reaffirmed and shall continue in force: To prevent loss to the company and its employes, and to preserve the interests and convenience of the public, the company and the employes agree not to resort to lockouts or strikes, but in the event of the parties being unable to satisfactorily adjust any differences or grievances which may arise from time to time, and which if not adjusted might cause a lockout or strike, a conciliation committee shall be appointed from time to time as such differences or grievances arise, to consist of three officers of the company named by the company and three of the employes to be named by the employes, and such committee shall investigate and consider such differences and make their report thereon. If such committee shall be unable to agree the differences or grievances shall be submitted to a board of arbitration consisting of one disinterested citizen of Ontario to be appointed by the company and one disinterested citizen of Ontario to be appointed by the employes, and a third arbitrator to be appointed by these two, who shall also be a disinterested citizen of Ontario; and such board shall investigate and determine all such differences or grievances and make their award, and the award of the said board of arbitration so constituted or majority thereof, shall be final and binding as to such differences or grievances for the period fixed by such award.

It is said that this agreement will increase the company's pay list over $80,000 a year.

Board of Railway Commissioners.—Chief Commissioner Killam and Commissioner Mills, with a staff of officials, left Montreal, July 6, for a tour in Western Canada. After a short sitting at Fort William, Ont., when the question of the entry of the G. T. Pacific Ry. into that place was discussed, the Commissioners proceeded to Winnipeg, and for several days from July 9 were engaged in hearing the objections to the route by which the G.T. Pacific Ry. proposed to enter that city from Portage la Prairie, and a decision was announced July 13. Several other cases were heard and the Winnipeg sittings were concluded July 16. Sittings of the Commission were announced to be held at Regina, Sask.; Calgary, Alta, as well as other points, which were not specifically named.

A portrait of M. H. McLeod, who has been appointed General Manager Canadian Northern Railway, with biographical data, was published in our June issue.

Grain Elevator Notes.

Elevators, each having a capacity of 40,000 bush., are under construction at Claresholm, Stavely, Parkland, Cayley and Carstairs, Alta.

Plans have been completed for the erection of flour mills at Macleod and High River, Alta. Elevators are also to be built in connection with these mills.

The Empress Transportation Co., of Midland, which has been incorporated with offices at Midland, Ont., is authorized to own and operate elevators in connection with its navigation business.

The Canadian Distilleries, Ltd., which has been incorporated under the Dominion Companies' Act, with a capital of $1,000,000 and offices at Winnipeg, is given power among other things to erect and operate storage warehouses and elevators for the storage or shipment of grain. The provisional directors are: W. A. Faulkner, F. A. Emerson, H. A. Wise, W. R. Lewis, and G. Cooper, Winnipeg.

The Grain Commission appointed by the Dominion Government to investigate the whole question of the marketing of the grain crop of Western Canada, visited Great Britain during July, and inspected the elevator and other facilities for handling grain cargoes there. The commissioners also investigated the method of distribution throughout the country, and the market conditions prevailing.

The Deloraine Milling Co. has been incorporated under the Manitoba Companies' Act, with a capital of $40,000 and offices at Deloraine, for the carrying on of a general milling and elevator business, as well as other incidental business operations. The provisional directors are: J. Steedsman, Bera Pinch, Man.; W. S. Barker, G. N. Stewart, W. Perry, G. Whitlaw, J. Kirkwood, W. E. Cowan, G. Paterson, Deloraine; J. Johnson, Goodlands, Man.

The Port Arthur Elevator Co. has been incorporated under the Dominion Companies' Act, with a capital of $100,000 and offices at Winnipeg, to lease or otherwise acquire a terminal elevator, or elevators or warehouses, at Port Arthur, Ont., and to construct and maintain railway tracks in connection with the same; and to carry on the business of elevator owners generally throughout Canada. The provisional directors are: L. O. Downing, R. H. Moore, R. T. Evans, L. M. Pugh, W. E. Kneeland, Winnipeg, Man.

W. Askin, formerly of the Montreal and Lake Superior Line, and Mrs. Askin are spending the summer at Sylvan Lake, Mich.

1907

Ontario Jockey Club

Woodbine Park, Toronto

AUTUMN MEETING

September 14th to 21st

Racing and Steeplechasing

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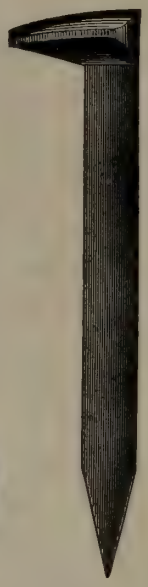

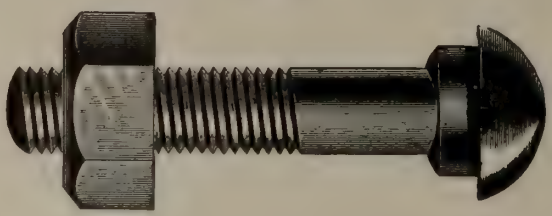

TORONTO — CANADA

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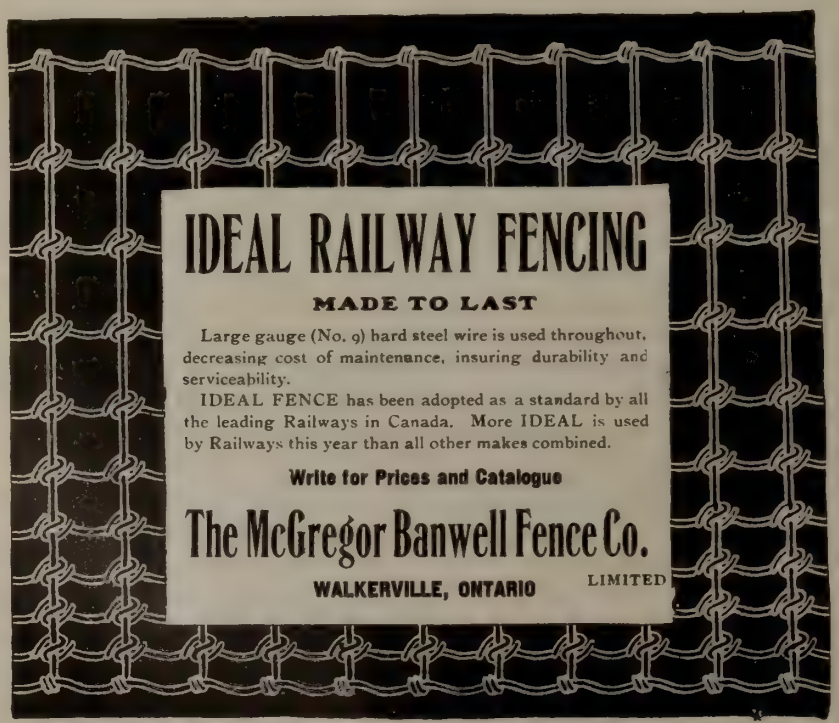

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Gen. Man. Western Canada, Toronto.

MARINE DEPARTMENT

The C.P.R. Co.'s Steamship Assiniboia.

The screw S.S. Assiniboia for the C.P.R. Co.'s service on the Great Lakes, was launched at Glasgow, Scotland, June 25. Her principal dimensions are: length, 348 ft.; breadth, 43½ ft.; depth, 26¾ ft. to awning deck, and she is divided into seven watertight compartments. There are four decks, viz., main, awning, promenade, and hurricane.

The fore part is divided into three compartments for carrying grain or cargo, the former being put on board through trunked hatches from the hurricane deck, and the working of the cargo accomplished by means of an overhead revolving shaft 140 ft. long, driven by a double cylinder steam hoisting engine with two revolving drums, with clutches to each of the five hatches, which arrangement ensures very rapid manipulation. The entrance to the passenger accommodation is on the main deck amidships, where there is a large spacious hall with two staircases. The entrance hall is panelled in teak with ornamental balustrade to the stairs, and the floor is laid with interlooking rubber tiles. Forward of the main entrance is the package freight deck, access to which is obtained by large double doors through ship's side. The awning deck is arranged for the accommodation of 195 first-class passengers in two and three-berth rooms, fitted up in the latest style with patent folding berths, sofa berth, washbasin with running water, etc. Aft of main staircase there are five cabins-de-luxe, panelled in mahogany and oak, with large brass bedstead, folding lavatory and sofa, and a private bathroom. The chief feature of the awning deck is a large central hall, about 140 ft. long, which is tastefully furnished with handsomely upholstered settees to match the surrounding framing. On the promenade deck there is another spacious hall in a large deckhouse, with a well in the centre which gives light to the central hall below. On either side there is accommodation for 70 first-class passengers, in three-berth staterooms, furnished similarly to the staterooms on the awning deck, and as the rooms on the promenade deck look out to the open, the large windows fitted with venetian blinds and curtains can be left open in any weather. The drawing room is at the fore end of this deckhouse and is tastefully finished in white enamel and gold. The main feature of this room is the formation of the sofa seats, which are arranged in bays forming cosy corners, with seats upholstered in frieze velvet. Writing tables, easy and arm chairs, also, are fitted, which gives the room a very handsome appearance. Amidships, immediately abaft the hall, is the dining saloon capable of seating 116 persons. The framing is finished in American walnut with Italian walnut panels, and the large rectangular bevelled glass horizontal sliding windows, together with a large dome skylight overhead, give efficient light and ventilation. The floor is laid with polished oak parquetry with walnut border. Handsome sideboards are fitted to match the framing. The smoking room is at the after end of the deckhouse and is tastefully designed and framed in light fumed oak with carved panels. Chairs and tables are in oak to match, and the sofa seats are upholstered in morocco leather. The floor is laid with terracotta, and white interlocking rubber tiles. The old gold spring blinds over the large bevelled glass windows and the tones of the skylight overhead complete a harmonious and refreshing color scheme. Between the smoking room and the dining saloon are the pantry, galley, and cold chambers, with all the latest facilities for catering for a large complement of passengers. The public rooms and the accommodation throughout the vessel are fitted with ornamental vertical radiators, each of which can be independently regulated. The hurricane dock is 275 ft. long, and forms a spacious promenade, access to same being by stairways at fore and aft ends. At the forward end of this deck there are the captain's and officers' rooms, and wheelhouse, with flying bridge over. Eight steel lifeboats are fitted under davits to comply with the Steamboat Inspection Act.

Powerful appliances are fitted for working the vessel, including a large windlass and capstan forward and two warping capstans aft. The propelling machinery consists of a set of quadruple expansion engines, having four cylinders working on four cranks balanced on the Yarrow Schlick and Tweedy system. The high pressure and first intermediate pressure cylinders are fitted with piston valves, and flat valves of the double ported type are fitted to the second intermediate and low pressure cylinders, all worked by the usual double eccentric valve gear, controlled by steam gear of the all-round reversing description. The crank shaft is of the built type, and together with the thrust and propeller shafting is of forged mild ingot steel. The propeller has four blades of cast steel secured to a boss of the same material. Water is circulated through the condenser by an independent centrifugal pump having also a suction to the engine room bilge to enable a large quantity of water to be pumped out of the ship in case of need. Independent air bilge and sanitary pumps are fitted for boiler feed as ejectors, ballast and general service purposes and in the engine room there is feed heater and a feed filter.

The four boilers are of the cylindrical return tube type, arranged to work with natural draught. They are constructed entirely of steel for a working pressure of 220 lbs. per square inch. An ash ejector is fitted in each stokehold. The vessel when completed will be equipped in a most handsome manner and with every requirement of the Lake Service. She is being built by the Fairfield Shipbuilding and Engineering Co., Ltd.

The Dominion Government has chartered the Midland Navigation Co.'s steamboat Midland Queen for the season as a lighthouse supply boat for the district above Montreal.

Marine Notes From the Twin Ports.

Our Port Arthur, Ont., correspondent wrote, July 16: Following is a statement showing shipments by vessels from Fort William and Port Arthur from opening of navigation, April 29 to June 30, with ports of destination:

	Wheat	Oats	Barley	Flax
Owen Sound	582,233 20	1,263,772 02	95,106 22	95,107 18
Midland	1,173,000 00	.....	.....	.....
Tiffin	205,000 00	.....	.....	.....
Depot Harbor	2,671,519 40	476,151 10	122,575 42	.....
Collingwood	152,400 00	.....	.....	.....
Point Edward	917,166 50	7,000 00	5,000 08	.....
Meaford	351,957 40	132,266 06	10,353 06	.....
Goderich	1,089,524 50	504,342 00	61,428 00	54,667 26
Thorold	59,650 20	.....	.....	.....
Kingston, Prescott, Montreal	4,103,047 50	1,988,011 26	73,873 06	131,635 43
Port Huron	93,368 10	.....	.....	.....
	* 314,542 10	.....	.....	.....
Buffalo	1,045,294 00	.....	.....	.....
	*3,902,293 50	969,518 24	38,521 30	.....
	16,050,998 40	5,341,062 00	406,858 18	281,410 31
Canadian Vessels	11,834,162 40	4,371,543 10	368,336 36	281,410 31
Foreign Vessels	4,216,836 00	969,518 24	38,521 20	.....

* Freight vessels.

Shipments for the month of July, to date, have been particularly active. On July 11 there was a shipment of 900,210 bush.; on July 12, 897,000; on July 13, 607,000, and at present there is a large tonnage in port loading and to be loaded. All the elevators in Port Arthur and Fort William are practically full. There is estimated to be about 15,000,000 bush. in transit and in store in the interior elevators, and about 10,000,000 bush. of the crop of 1906 still in farmers' hands to come forward. This season is likely to exceed anything in the grain carrying trade at the head of the Canadian Lakes.

Freight rates have ruled high all summer. Present rates are to Georgian Bay ports 2c., Buffalo 2½c., Kingston 5⅛c., and Montreal 7c. on wheat.

Coal receipts are particularly heavy at both the Canadian Pacific and Pittsburg docks. The latter is now in splendid working condition, and is giving better despatch than any dock around the lakes.

LAUNCHING OF THE S.S. ASSINIBOIA, AT GOVAN, SCOTLAND.

The Lake Freight Situation.

Our Winnipeg correspondent wrote July 15: The bulk freight season so far has been the most prosperous in the history of the Great Lakes for both Canadian and U.S. vessel owners. An exceptionally heavy ore movement on the U.S. side of the line keeping U.S. vessels pretty much out of the Fort William grain trade, has resulted in the entire movement being left in the hands of Canadian vessels, and even at this late date Canadian tonnage is chartered in the grain trade to the end of July, and as the stocks of grain at Port Arthur and Fort William show no signs of material decrease the prospects are very bright indeed for the Canadian fleet being kept profitably employed in the grain trade until the new crop commences moving. In addition to the unusual prospects in the grain carrying business there has been an exceptional movement of coal to the Canadian head of the lakes and the steel rail trade has also provided steady employment for a number of vessels, and new boats are being quickly snapped up by the rail shippers as fast as they make their appearance on the lakes. The high price of wheat has had a tendency to retard the movement from eastern elevators, and it begins to look as though a blockade will take place at that end of the route very early in the fall, unless the foreign demand becomes a great deal more active than it has been during the past six weeks. Rates on grain are holding steady at 2c. Georgian Bay, 2¼c. Buffalo, 5½c. Kingston, and 7c. Montreal, without insurance in all cases.

A letter has been received by the Secretary of the Canadian Peace and Arbitration Society from the American Peace Society in reference to the report, that training ships of war are to be placed on the Great Lakes, in which it is stated that "Direct information from the State Department at Washington assures us that the report has no real foundation."

The steamboat Kawartha of Fenelon Falls, Ont., arrived at Orillia, July 17, via the Trent Valley Canal, being the first steamer to go through from the Kawartha Lakes with passengers. On the same day the Islay took an excursion from Barrie, but the shaft broke while in lock 3 of the canal, and the 200 passengers had to remain on board all night until repairs were made.

Beeson's Marine Directory.—The issue of this directory of the vessels trading on the Great Lakes for the season of 1907, being the 21st year of issue, has been published by H. C. Beeson, Chicago, Ill., who announces that while the publication offices will continue to be in Chicago, the general office, where he will in future reside, will be at Niles, Mich. In addition to the standard features of the work, corrected up to June 1, 1907, there is given a list of all vessels that are rated in Inland Lloyds, with the ratings given, as corrected to June 1. This separate list of classified vessels includes everything rated by Lloyds, as they no longer rate steel vessels or tugs. The illustrations, which have always been a feature of the work, show vessels launched, salvage operations or other notable occurrences in the marine world during the year. The following of special interest to Canadian marine men are given: New ore carrying steamboat Sir Thomas Shaughnessy; Niagara Navigation Co.'s steamboat Corona; diagram showing locks of the Canadian canals; view of music room C.P.R. S.S. Empress of Britain; turbine steamboat Governor Cobb of the Eastern Steamship Co.'s Boston-St. John line; C.P.R. S.S. Empress of Ireland at sea; map of the Great Lakes showing location of all lake ports; frame and engines of Hudson's Bay Co.'s new steamboat Mackenzie River; salvage of S.S. G. W. Elder at New Westminster, B.C.

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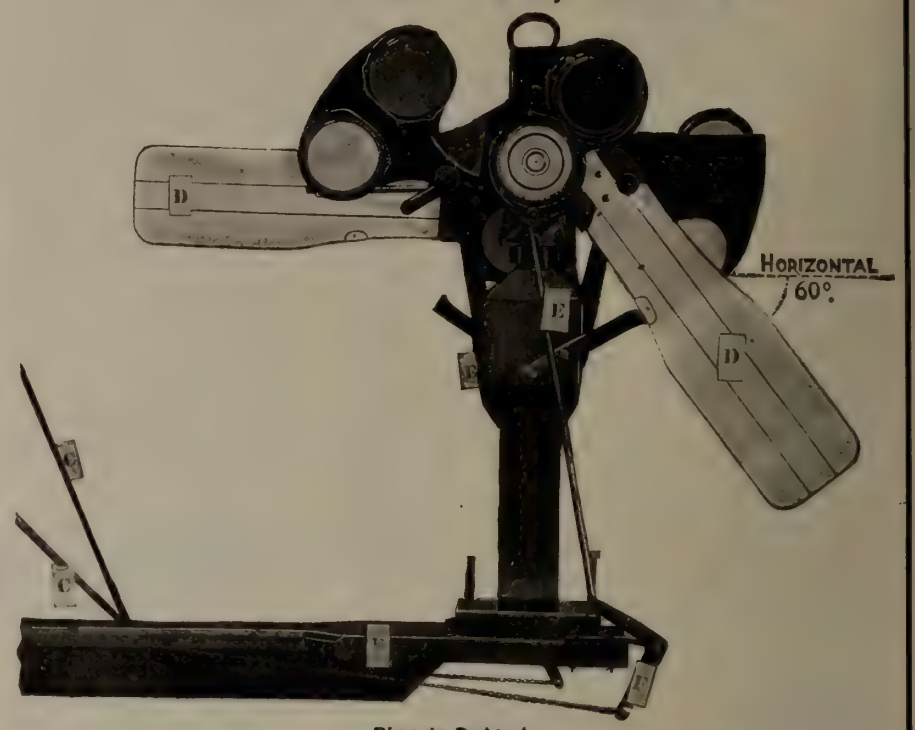

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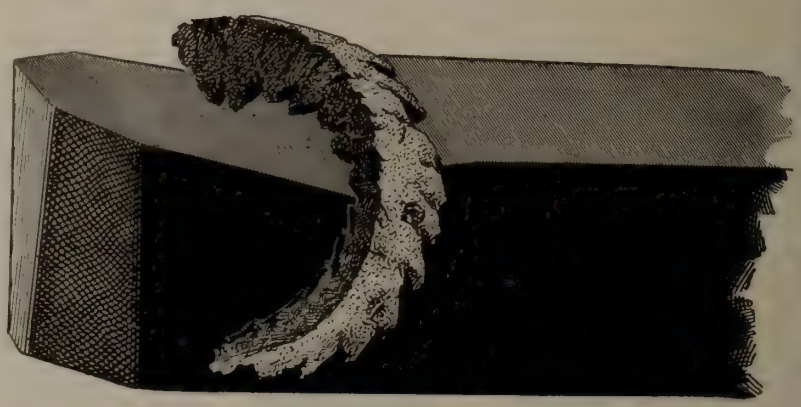

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LIST OF STEAM VESSELS REGISTERED IN CANADA FROM JUNE 15, 1907, TO JULY 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Barnet	122,373	Barnet, B.C., 1907	Screw 2 N.H.P.	36.8	8.7	4.5	12	8	Vancouver, B.C.	G. A. Ward and A. E. Burnett, Barnett, B.C.
Beatrice	122,374	Vancouver, B.C., 1907	" 5 "	44.8	11.8	5.6	26	18	" "	H. O. Bell-Irving, Vancouver, B.C.
Chipmunk	122,372	" "	" 1 "	23.0	5.9	2.5	2	1	" "	A. Purvis, Vancouver, B.C.
City of Grand Rapids	116,955	Grand Haven, U.S., 1879	" 40 "	122.5	24.6	9.3	327	196	Sarnia, Ont	W. Gillies, Tobermory, Ont., and J. W. T. Rutherford, Wiarton, Ont.
Covenhoven	121,837	Southampton, Eng., 1906.	" 8 "	28.0	8.1	4.2	11	6	St. John, N.B	Sir W. C. Van Horne, Montreal, Que.
Daring	122,375	Vancouver, B.C., 1907	" 16 "	72.0	17.8	8.0	81	55	Vancouver, B. C.	W. W. White, Vancouver, B.C.
Dorothy	122,370	" "	" 2 "	31.8	8.6	4.1	10	7	" "	D. Bell-Irving, Vancouver, B.C.
Ella & Jennie	122,245	Shelburn, N.S., 1907	" 25 "	50.5	16.6	7.0	29	25	St. Andrews, N.B.	I. and W. J. Ingalls, Grand Manan, N.B.
Enterprise	122,460	Yarmouth, N.S., 1907	" 42 "	108.0	25.0	8.6	211	98	Yarmouth, N.S.	The New Burrell-Johnson Iron Co., Ltd., Yarmouth, N.S.
Gen. W. B. Franklin	122,352	Pamrapo, N.J., 1880. Alexandria Bay, N.Y., 1899	" 1 "	54.8	9.4	2.7	20	16	Kingston, Ont.	P. Cavanagh, Perth, Ont.
Judge Moore	121,840	Tarrytown, N.Y., 1885	" 13 "	62.3	13.7	5.4	36	25	St, John, N.B	J. P. Lunn, Albert, N.B.
Lillie Seaman	116,848	Owen Sound, Ont., 1907	" 2 "	45.0	12.0	6.0	19	13	Owen Sound, Ont.	N. D. Seaman, Sauble Falls, Ont.
Mystery	116,849	Lion's Head, Ont., 1906	" 5 "	60.10	14.2	6.11	52	33	" "	C. Sencabald, Lion's Head, Ont.
Nora	122,377	Pt. Guichon, B.C., 1907	" 5 "	45.1	11.7	4.6	24	17	Vancouver, B.C.	G. Nicolick, Port Guichon, B.C.
Okanagan	122,378	Okanagan Ldg., B.C., 1907.	Pad. 32 "	193.2	32.3	7.7	1078	679	" "	C.P.R. Co., Montreal, Que.
Otonabee	111,890	Peterborough, Ont., 1907	Screw21 "	111.2	24.0	5.6	136	87	Peterborough, Ont.	Otonabee Navigation Co., Ltd., Peterborough, Ont.
Rapids King	122,407	Toronto, Ont., 1907	" 15 "	239.0	40.0	9.5	1801	1191	Montreal, Que.	R. Forget, Montreal, Que.
Smith Bros.	121,839	Cent. Blissville, N.B., 1907.	" 6 "	36.8	9.4	3.5	13	9	St. John, N.B.	Smith Bros., Central Blissville, N.B.
Takwan	122,246	St. Andrews, N.B., 1905	" 6 "	28.6	11.0	5.6	11	9	St. Andrews, N.B	T. R. Wheelock, Boston, Mass.
Teal	122,193	Steveston, B.C., 1907	" 2 "	38.0	8.8	4.2	18	13	NewWestminster,B.C.	H. Trim, Westham Islands, B.C.
Togo	122,492	Newcastle, N.B., 1907	Pad. 9 "	86.4	17.5	5.6	51	32	Chatham, N.B.	W. Richards Co., Ltd., Campbellton, N.B.
Vanguard	116,907	Cape d'Or, N.S., 1907	Screw 8 "	47.2	12.3	6.0	16	11	Parrsboro, N.S.	R. W. Petre, Cape d'Or, N.S.
Vixen	122,404	Lachine, Que., 1907	" 2 "	32.0	5.9	2.7	3	2	Montreal, Que.	A. S. Forman, Montreal. Que.
Volage	122,371	Vancouver, B.C., 1895	" 1 "	36.5	10.0	5.0	13	9	Vancouver, B.C.	W. M. Sprott, Vancouver, B.C.
Weigo	121,919	Kenora, Ont., 1907	" 1 "	22.0	6.0	3.4	2	1	Kenora, Ont.	C. N. Sterling, Kenora, Ont.
Winnie	121,838	Jemseg, N.B., 1906	" 13 "	46.9	12.1	5.2	26	17	St. John, N.B	G. W. Colwell, St. John, N.B.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM JUNE 15, 1907, TO JULY 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons	Home Port.	Owners.
Adriatic	122,308	Bridgewater, N.S., 1907	Schr.	96.0	26.8	10.0	129	99	Lunenburg, N.S.	J. Oakes, Bridgewater, N.S.
Annie G. W.	122,422	Sheet Harbor, N.S., 1907	"	42.6	15.0	6.0	17	17	Halifax, N.S.	J. Westhaver, Sheet Harbor, N.S.
A. Renaud	122,258	La Petite Riviere. St. Francis Xavier, Que.	"	68.5	23.0	8.6	83	83	Quebec, Que.	A. Renaud, La Petite Riviere, St. Francis Xavier, Que.
Crystal	122,130	Mahone Bay, N.S.	"	44.4	11.6	6.2	15	15	Halifax, N.S.	I. Dauphinée, St. Margaret's Bay, N.S.
Dredge no. 10	117,040	Saginaw, Mich., 1889	Dred.	92.0	32.5	7.0	434	354	S. S. Marie	C. S. Boone Dred. & Cons. Co., Ld., Toronto.
Dredge no. 14	122,431	" " 1891	"	100.0	34.6	8.0	451	352	"	" " " "
Edna M	122,570	Shag Harbor, N.S., 1907	Sloop	34.0	11.0	6.0	11	11	Yarmouth, N.S.	W. J. Holliday, Shag Harbor, N.S.
Elva Belle	122,470	Clyde, N.S., 1906	"	32.0	11.2	6.0	11	11	" "	E. Thomas, Cape Negro, N.S.
Emmett	122,259	Ste. Irenee, Que., 1907	Barge	121.6	32.0	7.7	249	249	Quebec, Que.	J. C. Kaine, Quebec, Que.
Ena A	122,235	Clark's Harbor, N.S., 1907.	Sloop	35.5	12.0	6.0	12	12	Barrington, N.S.	J. Newell, Cape Island, N.S.
Enterprise	122,467	Cape Island, N.S., 1906	"	30.0	11.0	6.0	10	10	Yarmouth, N.S.	D. O. Gardner, Port la Tour, N.S.
Frances L	122,247	White Head, N.B., 1906	"	29.0	11.0	4.5	10	10	St. Andrews, N.B.	S. Cheney, Grand Manan, N.B.
Gladys	122,468	Shag Harbor, N.S., 1906	"	30.0	11.0	6.0	11	11	Yarmouth, N.S.	C. M. Wickens, Shag Harbor, N.S.
G. M. Stephens	122,282	Shelburne, N.S., 1906	"	35.6	11.5	6.4	12	12	Shelburne, N.S.	H. McAlpine, Lockeport, N.S.
Good Interest	122,491	Maisonette N.B., 1907	Schr.	32.0	12.0	4.6	10	10	Chatham, N.B.	J. W. Nixon, New Bandon, N.B.
Hattie B	122,248	Meteghan, N.S., 1903	Sloop	25.0	11.0	4.6	10	10	St. Andrews, N.B.	W. Benson, Grand Manan, N.B.
Hazel B. Miller	122,083	Charlottetown, P.E.I., 1907	Schr.	80.1	22.4	8.1	94	72	Charlot'town, P E.I	W. P. Burke, Charlottetown, P.E.I.
Kate	122,118	Pt. Hawkesbury, N.S., 1898	"	33.5	9.9	5.5	10	10	Sydney, N.S.	Mrs. K. de Friese, Louisburg, N.S.
Kate II	122,376	N. Westminster, B.C., 1906	Scow	66.9	26.0	6.7	107	107	Vancouver, B.C.	G. C. Mekeen, Vancouver, B.C.
Lita C	122,571	Mavilette, N.S., 1907	Sloop	33.0	13.0	6.0	13	13	Yarmouth, N.S.	M. Comeau, Mavilette, N.S.
Max C	122,309	Petite Riviere, N.S., 1907	Schr.	61.8	18.8	7.2	46	46	Lunenburg, N.S.	H. Croft, West Dublin, N.S.
Millie	122,117	Ingonish, N.S., 1907	"	37.7	13.0	6.2	13	13	Sydney, N.S.	J. F. Carey, Ingonish, N.S.
Raymond C	122,469	Cape Island, N.S., 1907	Sloop	33.0	11.0	6.0	11	11	Yarmouth, N.S.	R. L. Newell, Cape Island, N.S.
Rilla May	122,466	" "	"	33.6	11.3	6.0	12	12	" "	L. J. Nickerson, Cape Island, N.S.
Sarsfield	122,257	Baie St. Paul, Que., 1907	Barge	121.6	32.0	7.6	248	248	Quebec, Que.	J. C. Kaine, Quebec, Que.
Sophia Minch	116,956	Vermillion, O., 1873	Schr	180.0	32.0	12.6	583	538	Sarnia, Ont.	W. J. Colwill, Sarnia, Ont.
Spark	122,060	New Bandon, N.B., 1907	"	32.0	12.0	10.0	10	10	Chatham, N.B.	Wm. Fruing Co., Ltd., Jersey, Eng.
Stewart	121,986	White Horse, Yukon, 1907	Barge	105.5	34.5	5.5	166	166	Victoria, B.C.	Br. Yukon Nav. Co., Ltd., Vancouver, B.C.
Sweet Marie	122,084	Charlottetown, P.E.I., 1907	Schr.	75.8	21.3	7.0	77	77	Charlottet'n, P.E.I.	M. P. Hogan, Charlottetown, P.E.I.
Tahkeena	121,985	White Horse, Yukon, 1907	Barge	106.0	34.5	5.6	167	167	Victoria, B.C.	Br. Yukon Nav. Co., Ltd., Vancouver, B.C.
Thelma B	122,236	Clyde, N.S., 1907	Sloop	31.0	12.6	6.6	12	12	Barrington, N.S.	B. F. Cunningham, Cape Island, N.S.
White Wing	122,465	Short Beach, N.S., 1906	"	34.0	11.0	6.0	11	11	Yarmouth, N.S.	F. J. Harris, Short Beach, N.S.
Willie M	122,464	Clyde, N.S., 1907	"	34.0	12.0	6.2	14	14	" "	T. Salisbury, Port la Tour, N.S.
Yolanda	116,908	Parrsboro, N.S., 1907	Schr.	78.4	23.1	9.0	86	77	Parrsboro, N.S.	D. A. Huntley, Parrsboro, N.S.

Atlantic and Pacific Ocean Marine.

N. Dunlop, Chairman of the Allan Steamship Co., Glasgow, Scotland, was given a Knighthood in the list of King's birthday honors.

The C.P.R. S.S. Empress of Britain arrived in Quebec July 18, at 9 p.m., having made the run from land to land in 5 days, 3 hours, the record trip.

P. J. Smith, for the past 20 years wharf superintendent of the Allan Line at Boston, Mass., and prior to that, assistant wharf superintendent Allan Line at Montreal, died at Boston, June 5.

A. Piers, Manager C.P.R. Steamship Lines, is reported to have said on arriving in Montreal recently from England, that the headquarters of the lines would in future be in Liverpool, Eng., and that he would remove there.

The Allan Line S.S. Victorian, which reached Montreal June 15, was 60 hours overdue, the delay being occasioned by a dense fog during which the steamer drifted. So dense was the fog that the run for one day was only 15 miles.

Capt. Pickering, heretofore commander of the Allan Line S.S. Corinthian, has been appointed commander, and M. Freer, heretofore chief officer of the Allan Line S.S. Ionian, has been appointed chief officer of the new Allan Line S.S. Corsican.

The Thomson Line S.S. Devona, outward bound from Montreal, struck an iceberg in the Atlantic during a fog, and sprang a leak. On reaching Quebec, June 15, it was found that several plates had been sprung, and that the forehold was full of water.

The Dominion S.S. Montcalm, which was engaged at Sydney, N.S., in connection with the transfer of the mails to the trans-Atlantic liners at that port, ran on a sandbar below the breakwater at North Sydney, July 4, but was floated off the same day without serious injury.

The new Allan Line S.S. Corsican maintained an average speed of 17.56 knots an hour on her trial trip on the Clyde. She sailed from Liverpool on her first trip to Montreal, July 11, and has taken the place of the S.S. Ionian, which will be put on the Glasgow-Montreal run.

It has been announced in Montreal that, according to present arrangements, the C.P.R. Atlantic steamships will again make St. John, N.B., their winter quarters, and as in 1906, Halifax will be utilized only as a port of call to embark and disembark mails. The Allan Line, it is understood, will follow as far as possible the arrangements for 1906-07.

At a meeting of the Shipping Federation of Canada at Montreal, July 10, the question of the application signed by the longshore, men, under the terms of the recent award,

for the bonus at the end of the season was considered. It was stated that 550 men had then signed. A later report states that 1200 men have signed.

The Allan Line S.S. Virginian sailed through the Straits of Belle Isle on her outward voyage July 9, and the Allan Line S.S. Corinthian passed inwards through the straits July 10. Thomson and Donaldson Line freight steamers have passed through the straits, so that the northern route was clear for navigation July 9.

An Ottawa dispatch of July 11 stated that the Government officials were of opinion that the recent experiments had not proved that Sydney, N.S., was a suitable port for the landing and despatch of mails. The Postmaster-General is quoted as saying that the most suitable and convenient national mail port on the Atlantic coast is Halifax, N.S.

Commander Spain, Dominion Wreck Commissioner, held an investigation at Montreal, July 6, into the circumstances attending the stranding of the C.P.R. S.S. Montrose on Red Island Reef, July 2. The Montrose, coming up the river in charge of Pilot Talbot, ran on the reef during a thick fog, while going at a high rate of speed. The finding of the court will be announced later.

The S.S. Olenda, which has been under charter to the Pickford & Black Co., Halifax, N.S., for the West Indies passenger trade, sailed for England, July 15, with passengers and cargo, her charter having run out. She is replaced on the service by the Elder-Dempster S.S. Sobo, heretofore on the run between Liverpool and West African (Gold Coast) ports.

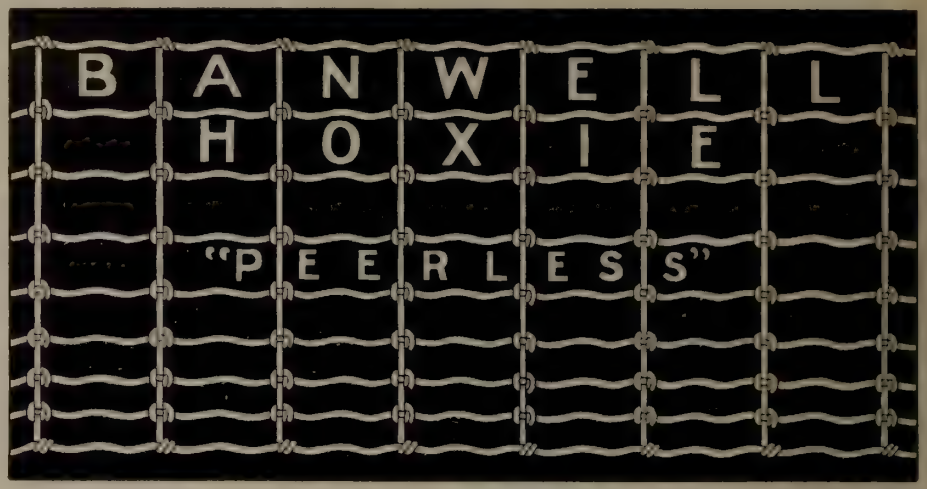
An order has been placed with British shipyards for the construction of four freight steamships for the Blue Funnel Line, trading between Liverpool, Eng., and Victoria, B.C., via China and Japan. The new vessels are to be similar in design to the Bellerophon and four other steamships added to the fleet in 1905-06, but will be 50 ft. longer. The dimensions of the Bellerophon were given in our issue of April, 1906, pg. 225.

The question of the future of the port of Quebec as the terminus for trans-Atlantic steamship business is, according to the steamship companies, largely in the hands of the ship laborers. It was stated that the C.P.R. is considering the desirability of making the Empress of Britain and the Empress of Ireland run on to Montreal owing to the action of the Ship Laborers' Society in increasing the cost of night and Sunday work.

A member of the firm of H. and A. Allan, Montreal, was quoted July 14 as saying that the S.S. Bavarian was doomed, and would never sail again. The steamer struck on Wye Rock near Grosse Isle, in the fall of 1905, and remained there until the fall of 1906, when she was raised and beached. Pumping operations are being carried on at the stranded vessel, and the more sanguine of those engaged in the salvage operations stated July 13, that they had not abandoned all hope of making a success of the operations.

Lieut.-Col. W. A. Anderson, Chief Engineer of the Department of Marine, sailed recently from Montreal on a trip down the St. Lawrence River and Gulf as far as Belle Isle, Nfld., to inspect the new aids to navigation erected and in course of erection. It is expected that the trip may result in the conclusion of some agreement with the Newfoundland Government by which Canada will replace some of the less distinct lights on the Newfoundland coast by improved lights so as to facilitate the navigation of the Gulf.

The contract which has been given the Canadian-Australian Line for the renewal of



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Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian (generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

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"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106.10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

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F. T. GRIFFIN, Land Commissioner, Winnipeg.

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the steamship service between Vancouver, B.C., and Sydney, Australia, for two years from July 31, carries with it, press reports state, certain conditions for the improvement of the service. The steamships at present on the route take 24 days to make the trip, and it is desired to cut this down to 18 or 19 days, so that it may be possible to have the mails landed in Great Britain in 29 or 30 days. The C.P.R. will give the mails a fast run across the continent, and will carry them across the Atlantic on its Empress steamships.

The Allan Line of steamships, during the six months ended June 30, carried 54,018 passengers into Canada, and 7,106 passengers from Canada to Great Britain. The figures of the different classes of passengers carried, compared with those for the same period of 1906, are:

INWARD	1907	1906
First Class	1,337	1,498
Second Class	13,759	12,634
Third Class	38,922	29,402
Total	54,018	43,534
OUTWARD	1907	1906
First Class	1,227	1,331
Second Class	3,203	2,392
Third Class	3,916	3,386
Total	8,346	7,109

The C.P.R., the Dominion Line, and the Donaldson Line, also report a considerable increase in the number of passengers carried into Canada during the same period, but they do not publish the figures

In connection with the project to establish fast steamship lines on the Atlantic and the Pacific, subsidized by the British, Canadian and Australian Governments, the Yorkshire Post (Leeds, Eng.,) said July 10: "Lord Strathcona, however, is striving to attain success in a manner which seems to indicate he intends the scheme to be his ultimate work for the Empire". So far as the trans-Atlantic service is concerned it is proposed to employ 25-knot steamships, for which a subsidy of £450,000 a year, for 10 years, to be borne equally by the British and Canadian Governments would be required. The amount of the subsidy for the trans-Pacific line has not been specifically mentioned, but a Melbourne cable of July 7 states that it is understood that the Federal Government declines to entertain the scheme of an 'All-Red' mail route, on the ground that it would be impossible to provide an annual subsidy of $2,000,000. The Imperial Government appointed a committee to consider the proposals for a subsidized steamship line between Great Britain and Canada, which reported adversely to the project and it is understood that the Government has decided not to do anything in the matter.

Pending other arrangements the steamboat Hazelton, chartered by the Hudson's Bay Co., has replaced this company's steamboat Mount Royal, recently wrecked in Kitsalas Canyon, Skeena River, and there will be no interruption to the traffic.

During the season of 1906, according to Beeson's Marine Directory, the following 15 U.S. vessels were sold to Canadian owners: Aberdeen, schooner, 1,045 tons; Alaska, propeller, 340 tons; Frank C. Barnes, tug, 46 tons; Cuba, propeller, 1,526 tons; Estelle, tug, 34 tons; Fashion, tug, 29 tons; Edward Fiske, tug, 43 tons; C. Hickox, propeller, 208 tons; Jean, tug, 12 tons; Kate, tug, 47 tons; Nordkin, schooner, 23 tons; John Owen, tug, 323 tons; Thos. R. Scott, propeller, 268 tons; Eliza Williams, tug, 37 tons; Wissahickon, propeller, 1,619 tons. These vessels represent a gross tonnage of 4,079 tons. In 1905, Canadian owners purchased 20 vessels from the U.S.—seven propellers, three tugs, three steam yachts, six schooners and one barge—having a combined gross tonnage of 8,948 tons.

Maritime Provinces and Newfoundland.

The keel of a 500 ton steel schooner is being laid at New Glasgow, N.S.

Claims aggregating $42,000 have been filed against the str. Oscar II, for salvage services.

Capt. D. Hunter, for the past 30 years port warden at Halifax, N.S., has, it is understood, resigned.

Capt. E. Perley has been appointed commander of the St. John River steamboat Victoria, succeeding Capt. C. Taylor, resigned.

Capt. J. C. Hopkins, formerly master of the West India S.S. Beta, died in Halifax, N.S., July 11, after an illness of several months.

Capt. W. S. McLeod, of Liverpool, N.S., died on the brigantine Blenheim while on a voyage from Madeira to Barbados, W.I., recently.

The Dominion Government steamship Stanley arrived at Glasgow, Scotland, June 25, where new boilers will be put in by the builders.

S. M. Brookfield, Halifax, N.S., has entered into a contract to float the steamship Turret Bell, which stranded in St. Peter's Bay, P.E.I., in Nov., 1906.

D. J. Seely, for many years engaged in shipbroking business at St. John, N.B., and Mrs. Seely, celebrated the 50th anniversary of their wedding July 13.

The Upper Lake steamboat Carthagenia, bound from Michigan for Boston, Mass., ran on the Half-Moon rocks, near Barrington, N.S., July 2, and has become a total loss.

The Newfoundland Government has appointed J. Carter to be Wreck Commissioner from La Manche to Fermeuse, District of Ferryland, succeeding W. T. S. Carter, retired.

The Insular Steamship Co. has been granted supplementary letters patent under the Nova Scotia Companies' Act, whereby its total capital stock has been increased from $7,000 to $25,000.

C. Way has been appointed Surveyor of Shipping at Harbor Breton, and Wreck Commissioner for the district of Fortune Bay, by the Newfoundland Government, succeeding P. Hubert, retired.

Two life-saving stations are to be established on the Prince Edward Island coast, by the Department of Marine, but we are advised that their location has not been definitely decided upon.

The steamboat Senlac, on her arrival at St. John, N.B., June 27, reported having been struck by lightning the previous night. The electrical machinery was burned out and woodwork and finish of the interior was badly damaged.

The freight and passenger steamboat Enterprise, built in Nova Scotia for the Three Rivers Steamship Co., has been completed and taken over by her owners. She will be put on a route between Montague, P.E.I., and Pictou, N.S.

The Swedish steamship Oscar II, from Wabana, Nfld., for Sydney, N.S., with iron ore for the Nova Scotia Steel Co., ran ashore in a fog, June 27, at Flint Island, N.S. She was floated the following day, without having sustained any serious damage.

We have been advised that arrangements for the building of a third winter steamer for the route between Prince Edward Island and the mainland are still pending, and no definite instructions as to its construction have been issued by the Department of Marine.

We are advised that the Bras d'Or Steamboat Co. has decided to place a steamboat larger than the Weymouth on the route in the spring of 1908. It has not yet been decided whether the vessel will be purchased or whether the company will have one built.

Negotiations are reported in progress for the purchase of the steamboat Champlain to replace the burned steamboat Crystal Stream, on the Washademoak route, St. John River, N.B. In the event of these proving fruitless, it is thought that a boat will be purchased in New York.

The Dominion Iron and Steel Co.'s pier at Bell Island iron mines, Newfoundland, was burned out July 5. The structure was 200 ft. from the shore, with which it was connected by a trestle. A temporary structure is being erected to enable the company to continue shipping ore.

The coroner's jury which investigated the circumstances attending the deaths of the four members of the crew of the St. John River steamboat Crystal Stream, which was burned June 21, returned a verdict, July 10, that the men came to their death by the burning of the steamer, the cause of the fire being unknown.

The treasury board of the St. John, N.B., City Council has decided to have a new schedule of port dues prepared on the same basis as the one now in force at Montreal. It was stated at the meeting that the rates would have to be doubled to put the business on a paying basis. The total revenue for 1906-07 was $28,000, and the deficit $22,436.

The Submarine Signal Co., of Boston, Mass., is installing stations along the coast of New Brunswick and Nova Scotia, to send submarine signals to vessels, for the Department of Marine. The company has already equipped the lightships stationed in the St. Lawrence River and the Bay of Fundy with the apparatus. It is also equipping the Nova Scotia Steel and Coal Co.'s steamers Wobun and Wasis with the apparatus to receive submarine signals.

The S.S. Senlac was run into and seriously damaged by the Red Cross Line S.S. Rosalind, near George's Island, off Halifax, N.S., July 1. The collision took place in a fog. The Rosalind was slightly damaged, but the Senlac was so seriously injured that she had to be beached. A survey July 5 recommended that the Senlac be floated for further examination. She is owned by the Senlac Steamship Co., and is managed by Wm. Thomson & Co., St. John, N.B. She is valued at $100,000.

A steamboat named Scotia was launched at Mahone Bay, N.S., June 26. Her dimensions are: length, 152 ft. over all, 143 ft. keel; breadth, 27 ft.; depth of hold, 9 ft. 8 in.; and she will measure 350 tons gross. The hull is iron-kneed, and galvanized fastenings with copper fastenings on the bottom. The deckhouses and topsides are of hard pine. The engines are being fitted at Halifax. The boat is expected to be completed early in Aug., and will be put on a route between Halifax and eastern shore points.

For the purpose of securing information as to the currents around Nova Scotia's southern coast, the Department of Marine, through the tidal and current survey section, is having a survey made during the current season under the charge of Dr. W. B. Dawson. The steamboat Gulnare is being employed for the purposes of the survey and a notification has been issued to mariners to the effect that the vessel will be anchored in deep water in the approaches to the Bay of Fundy, and on the steamship routes in the bay. She may be anchored in the entrance to the bay between Grand Manan and Digby Neck, in the offing of Yarmouth, or in the vicinity of Cape Sable, at points from 5 to 20 miles from shore. Mariners are requested to keep a

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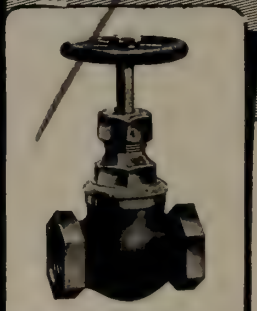

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lookout for the Gulnare on the several steamship routes and to give her a safe berth in passing, as she will be unable to manœuvre.

The Steamship Cabot Co. has been incorporated with a capital of $55,000 and offices at Sydney, N.S., to purchase the steamer Cabot, now under construction by the Grangemouth and Greenock Dockyard Co., Grangemouth, Scotland, and to pay for the same either in cash or fully paid-up shares; in the event of the loss or sale of the Cabot to replace her by any other steamer; and to carry on a general navigation business throughout the Dominion. The provisional directors are: F. W. Gray, W. H. Covert, J. K. L. Ross, H. J. McCann, Sydney, N.S.; and E. H. Russell, Glace Bay, N.S. This company has been formed in connection with the Dominion Coal Co., and the steamer will be registered at the port of Montreal. Her dimensions are: length, between perpendiculars, 155 ft.; breadth, moulded, 25 ft.; depth, moulded, 12 ft.; and she will have a deadweight capacity of 500 tons, her net register tonnage being 230 tons. The steamer is being built on the raised quarter deck principle, with engines aft, under Lloyds special survey for class 100 A1. She will be propelled by a screw, the power being furnished by a triple expansion surface condensing engine, having cylinders of 13, 22 and 35 in. diameter, by 25 in. stroke. Steam will be supplied by a return tubular boiler at a working pressure of 180 lbs.; and her estimated speed is 9½ knots an hour. Delivery is expected to be made by the end of Aug.

Province of Quebec Marine.

E. Dufresne has been appointed Harbor Commissioner for Three Rivers, Que., succeeding the late H. Hart.

Capt. Creighton, a former port warden of Montreal, has been appointed to the command of the Egyptian Mail Steamship Co.'s new S.S. Heliopolis.

The Richelieu and Ontario Navigation Co.'s rebuilt steamboat Quebec was given a trial trip July 2, and was put on the Montreal-Quebec run, in conjunction with the Montreal.

The Department of Marine has issued chart 13 of the River St. Lawrence, between Champlain and Pointe Citrouelle, Que., and chart 14, of the River St. Lawrence, between Batiscan and Cap Levrard, Que.

Commander Spain, Dominion Wreck Commissioner, completed hearing the evidence at Montreal, July 10, in the investigation into the sinking of the barge Havana by the steamboat Prescott, July 2. Judgment was reserved.

The Department of Public Works expects to have a new dredge, now nearing completion at Sorel, Que., at work on the St. Lawrence channel, early in August. She will be put at work on the mud flats between Crane Island and Grosse Isle.

The light on the lightship Valois in Lake St. Louis was dark on July 7, and an investigation showed that J. Crevier, the keeper, had fallen from the platform of the light into shoal water and fractured his skull. Death had apparently been instantaneous.

F. W. Cowie, Superintending Engineer of the St. Lawrence ship channel improvements, and V. W. Forneret, Resident Engineer in charge, returned to Montreal July 15, after having made an inspection of the work in progress. It was reported that eight dredges and 400 men were employed at different points.

The Dominion Government steamboat Rouville, built as a N.W. Police patrol boat for Hudson Bay, which was held in the ice at Les Eboulements, Que., during the winter, has been given a general overhaul at Sorel prior to being sent to her station. The hull was found to be uninjured, but the machinery required some repairs.

An investigation has been held by Commander Spain, Wreck Commissioner, at Montreal, into the circumstances surrounding an alleged violation of the navigation laws by the U.S. steamboat John Lambert, of Chicago. This vessel, the evidence of the officers of the Cassandra showed, steamed right across the bows of the liner as she was leaving port for Glasgow. The investigation was adjourned in order that officers of the John Lambert may testify.

The Richelieu and Ontario Navigation Co.'s steamboat Prescott carried away the gate of lock 1, Lachine Canal, July 2, and in backing collided with the Pittsburg and Erie Coal Co.'s barge Havana. The barge subsequently sank, and her cargo of pulp was transferred to the Montreal barge Bismarck. The Prescott had her bows damaged and there was also a leak near the stern. The damage is not serious, and as the Prescott had completed her trips for the season—the Rapids King having arrived to take up the run through the rapids—the company's schedule will not suffer. The Prescott will be repaired and held as a spare vessel.

Ontario and the Great Lakes.

J. M. Allan has been appointed Deputy Harbormaster of Toronto, succeeding the late Capt. J. M. Hall.

The Knapp roller boat is again afloat, and is being converted into a coal barge at the Polson Iron works, Toronto.

The Northern Navigation Co. is reported to be negotiating for the purchase of an additional steamer to add to its fleet.

It is reported that a contract has been let for the raising of the barge Resolute, which was wrecked off Toronto Island last fall.

A tug for the Great Lakes Dredging Co., and a steel hopper scow for the Dominion Government, have been launched at Collingwood, Ont.

The steam barge Ionia of Picton, Ont., tore two gates out of lock 17, Cornwall Canal, July 5. New gates were put in and navigation was resumed July 8.

The steamboat City of New York, owned by Richardson Bros., Kingston, Ont., ran aground at Sparrowhawk Point, near Cardinal, Ont., July 13.

Capt. T. Leduc, Kingston, of the steamboat Selkirk, dropped dead on deck as the steamer was entering the lock at Galops rapids on the St. Lawrence, July 7.

The tug Salvor and a number of pontoons have reached Newcastle, Ont., from Sarnia, Ont., for the purpose of making an effort to raise the sunken dredge Sir Wilfrid Laurier.

The captains of steamships entering Toronto are complaining of the large number of small yachts sailing about the bay at nights which persist in ignoring the regulations for displaying lights.

The Canadian Lake and Ocean Navigation Co.'s S.S. Corunna, from Port Arthur, Ont., to Montreal, was detained at Port Colborne, Ont., for 24 hours, July 15, owing to a breakdown of her machinery.

The tug boat Southwood ran into the Muskoka Lakes Navigation and Hotel Co.'s steamboat Saganio at Muskoka Wharf, Ont., June 26, and had her bow badly damaged. The Sagamo was uninjured.

The steamboat Victoria, in making the run from Ottawa to Thurso, Que., July 6, struck a log, losing some of the blades of her propeller and bending the tail shaft. She was towed back to Ottawa by a passing tug.

The Richelieu and Ontario Navigation Co. commenced its midsummer service by running the Kingston from Toronto for Prescott on July 7, and proposes to continue giving a Sunday trip until the end of Angust.

The schooner Annie Minnes, lying for some months on the bottom at Louisa Cove, Ont., has been raised and repaired. She is to be used as a tow barge for one of the steamers owned by Hepburn Bros., of Picton, Ont.

The steamboat Flora, shortly after leaving Windsor, Ont., collided with a dredger, July 21, and returned to port with her stem badly damaged. She had recently been refitted, and was on her first trip on the Lake Huron route.

The Turbine Steamship Co.'s S.S. Turbinia abandoned the Toronto-Hamilton portion of her combined Toronto-Lewiston-Hamilton run July 15, and is confining her schedule to two trips each way daily between Toronto and Lewiston.

The steamship Neepawah, which ran aground and sank at Dickenson's Landing, Ont., was raised by the Donnelly Salvage and Wrecking Co., Kingston, Ont., and towed into that port July 8, where she was repaired in the dry dock.

Capt. F. Castagnes, for 23 years in the Richelieu and Ontario Navigation Co.'s service, and from 1895 to 1905 in the Montreal and Cornwall Navigation Co.'s service, died at Cornwall, Ont., July 3, and was buried at St. Anicet, Que., July 5.

F. S. Spence, chairman; T. L. Church and J. T. Matthews have been appointed to represent the Toronto Harbor Board in a conference with the Toronto Board of Control regarding a number of questions in which both bodies are interested.

The Toronto civic sub-committee on improvements has asked the Harbor Commissioners for information as to the effect the reduction of harbor dues had on the business of the port, with the object of considering the question of their abolition altogether.

Eleven New York barges which brought coal to Ottawa at the opening of navigation are lying in the basin there awaiting cargoes. It has been usual for these barges to obtain cargoes of lumber, but this year there is very little lumber being shipped by boat to New York.

The Atlanta, Ga., Constitution published in a recent issue an account of the early history of the Niagara Navigation Co.'s str. Chicora, which, as the Let-Her B, made several successful blockade running trips into Charlestown, S.C., during the U.S. Civil War.

The Medal of the Royal Humane Society was presented to J. D. McCallum, at Fort William, Ont., July 5, for his services in connection with the rescue of the passengers and crew of the Northern Navigation Co.'s steamboat Monarch, wrecked at Isle Royal, in Dec., 1906.

Capt. Perry, of the steamboat Wissahickon, was fined $80 and costs at Fort William, Ont., July 5, for violating the new marine regulations, the first and second engineers not having signed articles. The men, who refused to sign, have been reported to the Department of Marine.

The British Government has stated that there can be no objection to the U.S. Government sending the gunboat Don Juan de Austria from the Atlantic Ocean to the Great Lakes, for use by the naval militia as a training cruiser. The gunboat was captured from the Spaniards in the late war, and it is said is to be unarmed.

T. H. Wood, of Orillia, Ont., is operating the steamboat Champion, connecting with all G.T.R. trains at Severn and Canadian Northern Ontario Ry. trains at Hamlet for all

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points on Severn River and Sparrow Lake. The Champion is 76 ft. long, 12½ ft. beam, fitted with fore and aft compound engines and lighted by electricity.

The Canada Construction and Dredging Co. has been incorporated under the Dominion Companies' Act, with a capital of $60,000 and offices at Toronto, for the purpose of carrying on a general business of dredging, construction work, building, general contracting work, towing, and other businesses germane thereto. The provisional directors are: J. B. Bartram, F. Dunlevie, C. McD. Bartram, Jas. Osborne, Miss L. A. Neil, Toronto.

Engineer J. McKenzie, of the fishing tug James Storey, of Port Coldwell, Ont., fell into the water between Jackfish and Home Point on Lake Superior, June 28. Capt. J. McGinnis jumped in to save him, and both were drowned. The two men who were left on board the tug did not know how to manage the engine and so were unable to render any assistance. They succeeded in taking the vessel into Port Arthur, where they reported the accident.

The U. S. steamboat City of Grand Rapids has been purchased by Georgian Bay owners, from Capt. Reid, Sarnia, Ont., to trade between Wiarton and Manitoulin Island points. The City of Grand Rapids was built at Grand Haven, Mich., 1879, her dimensions being: length, 122½ ft.; breadth, 24½ ft.; depth, 9 ft.; and she measures 327 tons gross. She is equipped with engines of the low pressure type, cylinders 30 by 3 in., steam being supplied by a firebox boiler 16 by 7¾ ft.

The J. K. McLauchlan Supply Co., Ltd., has been incorporated under the Ontario Companies' Act, with a capital of $40,000 and offices at Owen Sound, Ont., to acquire the business now carried on there by J. K. McLauchlan, and to extend the same. The company is also authorized to carry on a general cartage, warehousing, storage, forwarding and shipping business. The provisional directors are: Jas. K., Jas., and Mrs. M. L. McLauchlan; J. M. and Miss M. A. R. Drake, all of Owen Sound.

The Upper Ontario Steamboat Co. is operating on Larder Lake, Lake Temiskaming and White River and Long Lake. Following is a list of its steamboats, with the names of the captains and chief engineers:

Geisha	L. King	T. Arbin
Blanche	J. Morin	J. Donaldson
Gipsy	A. Hicks	C. Welsh
Wenona	H. S. Brickenden	Geo. Willis
St. Antoine	F. Lawrence	Geo. Mongrain
Britannia	F. Vincent	J. Purcell
Adrelexa	W. McKenney	W. McKay
Aileen	L. Whalen	T. Bonsell
S and Y.	F. W. Hendry	A. Kent
Lena May	W. Hamilton	A. Menard

The O'Connor Steamboat and Hotel Co. operates steamboats on Lake Temagami and adjacent waters between Temagami station, on the Temiskaming and Northern Ontario Ry., and Matawabika Falls, the junction of the lake navigation with the Montreal River. The company's steamboats are running on the following routes: Belle, from Temagami station to Lady Evelyn Hotel; Wanda, from Temagami station to Temagami Inn; Chance, from Lady Evelyn Hotel to Sharp Rock portage; Beaver, on Diamond Lake, and Marie, on Lady Evelyn Lake.

The Empress Transportation Co., Ltd., of Midland, Ont., has been incorporated under the Ontario Companies' Act, with a capital of $200,000 and offices at Midland, Ont., to carry on in all its branches the business of a navigation and transportation company, and in connection therewith to buy, sell, lease and charter vessels, to construct or acquire wharves, docks, etc., to operate grain elevators and to acquire stock in similar companies. The provisional directors are: Jas. Playfair, D. L. White, D. S. Pratt, D. Clark, J. W. Benson, Midland. The company is a close corporation and no particulars as to its officers or operations are at present being made public.

The Ganley Line steamboat Batchawana, engaged in carrying ore for the Algoma Steel Co., was burned to the water's edge off Copper Mine Point, Lake Superior, June 28. The crew escaped in the small boats. The fire is supposed to have originated in the explosion of a lamp. The vessel was formerly known as the Robert A. Packer, and was built at Bay City, Mich., in 1881, being transferred to the Canadian register in 1906, when she was purchased by J. Ganley, Sault Ste. Marie, Ont. Her dimensions are: length, 220 ft.; breadth, 34 ft.; depth, 18 ft. 4 in.; tonnage—gross, 1,027; register, 674. She was fitted with engines of 67 n.h.p. The vessel is reported to have had an insurance value of $28,000.

The additional aids to navigation which the Department of Marine is installing at points on Lake Superior, include the following: Jackfish Bay—a 31-day Wigham lamp standing at the extreme western point of the large island in the mouth of the bay, about half a mile from the coal wharf. It will be so located that vessels can run for it as soon as they see it in approaching from either east or west, and they will leave it on the starboard side in passing, giving a berth of 300 or 400 ft., making direct for the coal wharf. It will be a small light arranged to burn for a month without any attention, but being only a harbor light, ought to answer all requisite purposes Point Porphyry—a first-class diaphone will be established in a building immediately south-east of the lighthouse. Welcome Islands—A small fog alarm will be established in a building to be erected east of the lighthouse on the summit of the most easterly island.

The first of the two new Upper Lake steamers under construction at Glasgow, Scotland, for the C.P.R., was launched June 25, and was christened Assiniboia. Her dimensions are as follows: length, 348 feet; breadth, 43½ ft.; and depth 26¾ ft. She is built of steel, constructed to be classed at Lloyds as A1 for Canadian lake service, and will have accommodation for over 250 first-class passengers. She will have a speed of over 16 miles an hour, with all the modern devices for the safety and comfort of her passengers. The interior fittings and furnishings will be of the latest and most improved pattern, remarkable more for their solidity, simplicity, good taste and quality, than for mere display. The Assiniboia will cross the Atlantic Ocean under her own steam in Sept., and will be cut in two at Quebec, and rejoined at some point on Lake Erie above the Welland Canal. The second vessel, which is expected to be ready for launching at an early date, will be named Keewatin.

Manitoba, Saskatchewan, Alberta, Etc.

The Dominion Government steamboat Sir Hector struck a sand-bar at the mouth of the Red River near Selkirk, Man., July 4, and sank almost immediately. The crew escaped in row-boats to Selkirk. The steamer nearly turned over in sinking.

R. Hoerschegen and G. W. Sparkes recently started from Edmonton, Alta., purposing to make a canoe trip to the Gulf of Mexico. They will proceed by the North Saskatchewan River to Lake Winnipeg, thence by the Red River to North Dakota, where they will have to make a 10-mile portage to the waters of the Mississippi, which river they will follow to the Gulf.

Contractors engaged in ditching on the Minnesota State experimental farm at Crookston, have turned up a ship's anchor of antique pattern, buried at a depth of 6 ft., in solid clay under sod never before broken. The anchor is similar to those used by the roving Norsemen 900 years ago, and it is surmised that it is a relic of a Norse expedition, during the period when the Red River Valley was a portion of Lake Winnipeg, and could be reached by sail from the Atlantic Ocean by Hudson Bay.

The Bird's Hill Land Co., of Winnipeg, has been incorporated under the Manitoba Companies' Act, with a capital of $150,000, and offices at Winnipeg, to carry on a number of businesses, including that of a general navigation company, in connection with which it may build, charter or otherwise acquire steam or other vessels. In connection with the development of its holdings of land it may construct tramways to be operated by steam or electricity, and may purchase locomotives and cars for the operation of the same. The provisional directors are: W. A. Ducker, W. R. Lee, W. Brydon, D. D. Wood, R. Wilson, W. J. Young, Winnipeg.

B.C. and Pacific Coast Marine.

Negotiations are reported to be in progress for the establishment of a shipbuilding yard at New Westminster, B.C.

The str. Constance, owned by the British Columbia Packers' Co., sank at River's Inlet, June 22, Capt. Neilson and five of the crew being drowned.

Capt. Eddie, Vancouver, B.C., has been appointed examiner of masters and mates at that port. He will conduct examinations for deep sea and coastal navigation, and it is also likely he will have charge of a naval school for the Dominion Government.

The str. Northwestern, running on the Skeena River, put into Bella Coola, July 10, badly injured. She ran on the rock upon which the Mount Royal was wrecked, but slid off and was run ashore. Temporary repairs were made to her bow and deck, and the run was continued.

The contract for the repairing of the steamboat Northwestern, recently ashore at La Touche, Alaska, has been let to the B.C. Marine Ry. Co. The work involves the placing of 40 new plates, 60 ft. of keel, 38 frames as well as other work, and the contract price is $47,000. The B.C. Salvage Co. received $55,000 for the salvage of the steamer.

The C.P.R. has arranged to construct a large jetty wharf at Vancouver, B.C. The first of the contracts for the extension of the C.P.R. piers at Vancouver, B.C., has been let to Capt. Bisset and E. Coleman. Work is to be started at once, and the pier is expected to be completed by the spring of 1908. It will be used entirely for the accommodation of the company's trans-Pacific steamers.

The second of the four new steamboats under construction for the Pacific Steam Navigation Co., completed her trials at Liverpool, Eng., and is on her way to the Pacific Coast. The vessels which are being built on the Clyde have the following dimensions: length between perpendiculars, 360 ft.; breadth, 46 ft.; depth, moulded to main deck, 46 ft.; depth to spar deck, 32 ft. 9 in. The deadweight capacity is about 3,400 tons on the summer free board. The propelling machinery consists of two sets of triple-expansion engines of 3,300 i.h.p.

The Hudson's Bay Co.'s paddle-wheel steamboat Mount Royal, operating on the Skeena River between Port Essington and Hazleton, B.C., was wrecked in Kitselas Canyon, July 6, six of the crew being drowned. She struck a rock while descending the rapids in the canyon, and sank within five minutes. The fifty passengers and several of the crew

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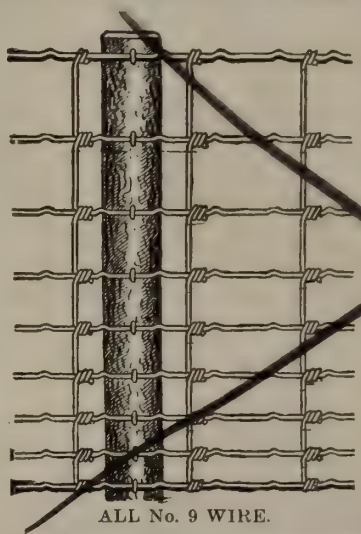

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were enabled to land on Ringbolt Island. Capt. Johnson was washed ashore on another island in the wreckage of the pilot house. Two of the engineers were carried through the canyon in the main part of the hull and landed at Kitselas village. The six men drowned include the chief officer, purser and steward. The steamboat was valued at $30,000, was built at Victoria, B.C., 1902, her dimensions being: length, 132 ft.; breadth, 28.4 ft.; depth, 4.8 ft. She was equipped with engines of 13 n.h.p., and she measured 471 tons gross, 296 tons register.

The Department of Marine is making a number of additions to the light stations and life-saving equipment on the Pacific Coast. A station at Ucluelet and another at Clo-oose are to be equipped with light surf boats, to be manned by crews from the locality under the command of experienced coxwains. A gasolene motor lifeboat, 36 ft. long, and of 40 h.p., is being built for Banfield Creek, where a fully equipped station with permanent crew will be established. A self-righting lifeboat of large size has been put in service at Victoria, B.C., and is available to be carried by steamboat to any point where she may be required. A horse trail is being constructed from Carmanah light station to Banfield Creek. Arrangements are being completed for the erection of wireless telegraph stations at several points on the Pacific Coast, and the department has completed arrangements by which the whaling steamboat Orion, located on the west coast of Vancouver Island, will proceed to the assistance of any vessel in distress, on being notified. The Government is also under a permanent arrangement with the wrecking vessel Salvor, stationed at Esquimalt, to proceed at once to the assistance of any vessel reported to be in distress.

THE S.S. PRINCESS ROYAL, C.P.R. BRITISH COLUMBIA COAST SERVICE.

The New Steamship Princess Royal.

The last addition to the C.P.R. British Columbia coast service is the S.S. Princess Royal, which left Victoria July 18 on her first trip to Skagway, Alaska. The hull has been built of Douglas fir so far as frames, planking, decks and the general structure is concerned. Her length is 227 ft.; beam, 40 ft.; depth, 17 ft.; her gross tonnage is 1,996, and net tonnage 981. She is built to Lloyd's special survey for an awning deck ship, and her scantlings are practically up to the requirements for a spar deck vessel. She has a superstructure two stories high, and is fitted with 72 staterooms for passengers. She has a fine observation room and first-class smoking-room on the upper saloon deck similar to the Princess Victoria. She is provided with bathrooms and otherwise fitted up in modern style. Her staterooms are large and airy. She has electric lights and steam heat throughout. Her carpets and furniture are of the best, her dining-room seats about 90 people, and is furnished throughout with linen, crockery, silverware, etc., up to the C.P.R. standard. Her motive power consists of 3 boilers, two of which are 13½ ft. in diameter by 12 ft. long, and one 12 ft. in diameter by 12 ft. long. She is provided with a triple expansion engine, cylinders 22, 40 and 60 ins. in diameter by 36 ins. stroke. Her propeller is 12 ft. in diameter, and her speed will be 14 knots an hour. The vessel is fitted with steam steering gear, and provided with the latest and best in navigating instruments. She has cargo capacity for about 800 tons of freight, and has room for a large number of second-class and deck passengers. A second-class smoking-room is provided, and arrangements made for a complete division between first and second-class passengers. She is supplied with particularly large and able life-boats for a vessel of this class, and is otherwise equipped with life-saving appliances and fire-fighting apparatus as required by law. Her anchors are handled by a steam windlass. For handling cargo double derricks are provided at both forward and after hatches. Double winches are used forward and arrangements made for lifting cargo up through the saloons and clear of the upper deck of all. Large side ports are provided for handling freight or live stock in and out of the 'tween decks. She has been constructed to meet the requirements on the B.C. coast. She will be licensed for about 800 passengers. She was built by the B.C. Marine Railways Co., Ltd., the contract having been awarded in June, 1905.

Notices to Mariners.

The Department of Marine has issued the following notices:

No. 43. June 4.—New Brunswick—115. South coast, Bay of Fundy, off Point Lepreau, whistling buoy replaced by gas and whistling buoy. Nova Scotia—116. West coast, Cape Fourchu, whistling buoy replaced by gas and whistling buoy. 117. South coast, north entrance to Lunenburg Bay, gas and bell buoy established. 118. South coast, off entrance to Pope harbor, Horse rock, buoy established.

No. 44. June 5.—Nova Scotia—119. South coast, Barrington bay, off White Knoll ledge, buoy established. 120. South coast, off east entrance to Negro harbor, whistling buoy established. 121. South coast, Lunenburg bay, Sculpin shoal, bell buoy established. 122. South coast, Lunenburg Bay, off Battery point, change in character of buoy. 123. South coast, Gut of Canso, southern entrance, Argos shoal, whistling buoy established.

No. 45. June 6.—Ontario—124. Lake Ontario, Bay of Quinte, Northport shoal, gas buoy established. 125. Lake Ontario, gas buoy placed to mark wreck of dredge sunk south-west of Port Hope. 126. Lake Ontario, off Toronto, Gibraltar point, light to be discontinued. 127. Detroit River, Limekiln crossing, additional buoy. 128. Detroit River, Belle Isle, wreck of tug W. B. Castle removed.

No. 46. June 8.—British Columbia—129. Vancouver Island, east coast, Stuart channel, Danger reef, Wigham lights replaced by gas-lighted beacon. 130. Vancouver Island, east coast, Dodd Narrows, Joan point, gas-lighted beacon established. 131. Vancouver Island, east coast, Horsewell channel, West rocks, gas-lighted beacon established. 132. Chatham Sound, Greentop Island, gas-lighted beacon established.

No. 47. June 10.—Quebec—133. River St. Lawrence, chart, Champlain to Pointe Citrouille issued. 134. River St. Lawrence, chart Batiscan to Cap Levrard issued.

No. 48. June 10.—British Columbia—135. Queen Charlotte Sound, Pine Island, fog alarm established. 136. Chatham Sound, Prince Rupert harbor, Ellinor rock, gas buoy established. 189. Chatham Sound, Prince Rupert harbor, change in color of Coast Island range gas beacons. 138. Chatham Sound, Prince Rupert harbor, Barrett (Bird) rock, change in color of gas buoy light.

No. 49. June 13.—British Columbia—139. Vancouver Island, west coast, Clayoquot Sound, Tofins Island, uncharted rock. 140. Port Simpson approach, Dixon entrance, McCullough rock, position of White and Zayas Islands.

No. 50. July 14.—North Atlantic Ocean—141. Bay of Fundy, current survey str. Gulnare to be avoided. Newfoundland—142. North coast, Strait of Belle Isle, Cape Norman, new lighthouse, change in character of light.

No. 51. June 15.—British Columbia—143. Chatham Sound, chart of Prince Rupert harbor issued.

No. 52. June 15.—Atlantic Coast—144. New edition of Gulf telegraph chart.

No. 53. June 21.—Nova Scotia.—145. South-west coast, Cape Sable Island, Clarke harbor, change in character of buoy. 146. Gut of Canso, southern entrance, Peninsula shoals, bell buoy established. 147. Cape Breton Island, east coast, Sydney harbor, west arm, change in range lights. New Brunswick—148. East coast, Shippigan Is-

land, Shippigan gully, new iron lantern, change in character of light.

No. 54. June 22.—Ontario Lighthouses Division—149. Quebec, Ottawa River, Caron point, change in character of light. Ontario—150. Lake Ontario, Toronto harbor, eastern entrance, front range light improved. 151. Lake Huron, Manitoulin Island, Michael point, light discontinued.

No. 55. June 25.—British Columbia—152. Queen Charlotte Islands, Graham Island, north coast, Masset harbor, hydrographic information. 153. Queen Charlotte Island, Graham Island, north coast, Virago sound, directions for entering Naden harbor. 154. Chatham Sound, Dodd and Cunningham passages, buoyage.

No. 56. June 28.—Ontario, minor waters—155. Rideau canal, Merrickville to Edmund's Lock, stake lights.

No. 58. June 29.—Ontario—161. River St. Lawrence, Lake St. Francis, Island bank, buoy established. 162. St. Lawrence River, Chrysler Island, change in character of buoy. 163. Detroit River, Ballard reef channel, gas buoys established and changed. 164. Georgian Bay, Parry Sound, buoy established.

The following have been issued by the U.S. Hydrographic Department:

No. 25. June 22.—St. Mary's River—1124. Mud Lake, Pointe aux Frenes, gas buoy discontinued. Detroit River—1127. Ballard reef, channel gas buoys established and changed.

No. 26. June 29.—St. Mary's River—1165. Mud Lake, Winter point range light station, change in lights. Detroit River—1169. Ballard reef channel, gas buoys established and changed. 1170. Limekiln crossing, east channel, range lights established. 1171. Limekiln crossing, east channel, gas buoys established.

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Steamers leave Sarnia 3.30 p.m. Monday, Wednesday and Friday (Friday steamer going through to Duluth).

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Sinking of S.S. Mary at Montreal.

Commander Spain, R.N., Dominion Wreck Commissioner, and Capt J Riley, Superintendent of Pilots, as assessor, held an investigation in Montreal on June 12 and 13 into the causes which led to the sinking of the S.S. Mary at her moorings on the north side of the Tarte pier, Montreal harbor, where she had been placed for the winter. The Court, after reviewing the evidence adduced, finds as follows:

"That the S.S. Mary was managed by Revillon Bros., and that in the fall of 1906 the vessel being out of commission and without master or ship's company, Revillon Bros. gave instructions to Mr. Fournier, who had been formerly master of the Mary for a short period, and who holds a certificate as master of a fore and aft rigged sailing vessel, to place her in winter quarters, and that this officer not having great experience of the movements of the water and ice during the winter season in Montreal harbor, took counsel with a Mr. Rochon as to the desirability of placing the vessel alongside the Tarte pier for the winter; this man, considering that the Tarte pier was a safe place, advised Mr. Fournier to place the Mary there. From all the evidence which it has been possible to gather, Mr. Rochon's knowledge of river conditions during the early spring were more general than particular. He had never before taken care of a steamer in the ice, nor had he at any time seen a steamer wintering in the ice in that locality.

"The Mary was placed alongside the Tarte pier and was frozen in there; she remained in that condition until the night of Mar. 28, or the morning of Mar. 29, when the ice began to go down the channel and fill up the narrow parts, causing the water to back up over the ice. The Mary being frozen in securely, and the ice by which she was held holding firmly and failing to rise with the rising water, the water overflowed the vessel, filling her and causing her to sink; the ice surrounding her slackening at the same time sufficiently to allow her to break through it. The backing up of the water over the ice, caused by the loose ice filling up the narrow parts of the channel, is a common happening and is a well-known fact to persons of experience on the river; the effect of this backing up of the water is much more noticeable below St. Mary's current, therefore it is invariably customary to place vessels in winter quarters in Montreal harbor inside of the guard or MacKay pier; the valuable plant belonging to Mr. Poupore, the contractor, was removed from the Tarte pier to a place inside the MacKay pier for winter quarters for the reason that the latter mentioned place was considered by the Manager far safer in every way.

"The Court is of the opinion that the man whom Revillon Bros. left in charge of their vessel during the winter was not competent to fulfil the task, and the authorities of the port of Montreal were not consulted in reference to the berthing of the vessel. The regulations respecting berthing of vessels in the port of Montreal were not complied with in the case of the Mary. In the opinion of the Court a far safer place in Montreal harbor might easily have been found to winter her. Rochon being the only man employed was unable to take the customary precautions to prevent the vessel being damaged at the time of the well-known spring conditions. For the above mentioned reasons, the Court is of the opinion that Revillon Bros showed a want of interest in the safeguarding of their vessel during the winter; there were many experienced men in Montreal from whom they could have taken advice, and who no doubt would have informed them that the Tarte pier was not a safe place to winter the vessel, but they apparently were thoroughly satisfied with leaving the matter in the hands of Fournier and Rochon, who, in the opinion of the Court, were not competent men for this particular work. There also apparently was no endeavor on the part of Rochon to cut away the ice round the vessel so as to give her a chance of rising with the water, a custom which is generally followed.

"The Court is therefore of the opinion, that Revillon Bros. are responsible for the damage caused to their vessel."

Capt. Slengenberg, a U.S. whaling captain, has been captured by the U. S. authorities, after a chase of three years, and taken to San Francisco, Cal., to answer a charge of murdering the chief officer of his vessel. The murder took place while the vessel was in Canadian waters at the mouth of Mackenzie River, but the Canadian Government has waived its right to try the accused captain.

The Department of Marine has issued a new edition of the telegraph chart of the Gulf, Lower St. Lawrence, and Maritime provinces, revised to May 1, 1907. The chart shows all existing telegraph lines and cables, tracks of vessels, telegraph stations operated by the Government of Canada, lighthouses, storm signal stations and other information of use to mariners.

Sault Ste. Marie Canals Traffic

The following commerce passed through the Sault Ste. Marie canals in June:

Articles.			Canadian Canal	U.S. Canal	Total
Copper	Eastbound	Net tons	1,204	6,024	7,228
Grain	"	Bushels	3,314,608	1,742,304	5,056,912
Building stone	"	Net tons	....	....	....
Flour	"	Barrels	447,840	341,940	789,780
Iron ore	"	Net tons	1,737,412	4,606,233	6,343,645
Iron, pig	"	"	1,670	3,036	4,706
Lumber	"	M. ft. B.M.	10,643	107,419	118,062
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	5,700,013	3,630,659	9,330,672
General merchandise	"	Net tons	11,732	1,748	13,480
Passengers	"	Number	2,461	1,190	3,651
Coal, hard	Westbound	Net tons	18,442	137,727	156,169
Coal, soft	"	"	368,221	1,124,844	1,493,065
Flour	"	Barrels	....	....	....
Grain	"	Bushels	....	....	....
Manufactured iron	"	Net tons	10,996	34,615	45,611
Salt	"	Barrels	2,600	41,279	43,879
General merchandise	"	Net tons	67,524	62,882	130,406
Passengers	"	Number	1,762	1,776	3,538
Freight—Eastbound		Net tons	2,056,650	4,976,976	7,033,626
" Westbound		"	465,555	1,366,261	1,831,816
Total freight		"	2,522,205	6,343,237	8,865,442
Vessel passages		Number	993	2,141	3,134
Registered tonnage		Net	1,951,962	4,676,300	6,628,262

The Kirkfield Lift Lock.

The official opening of the steel lift lock on the Trent Valley Canal at Kirkfield, Ont., took place July 6. The opening of this lock renders navigable a stretch of water extending from Barrie and Orillia on Lake Simcoe in the west, to Healey's Falls on the east, a distance of 160 miles. Unlike the lift lock at Peterborough, which is of concrete, that at Kirkfield is of steel. A few facts and figures relating to the lock are: Height of lift, 48 ft. 6 ins.; dimensions of presses: external diameter of cylinders, 8 ft.; diameter of ram, 7 ft. 6 ins.; working stroke, 48 ft. 6 ins.; depth of water in chambers, 8 ft.; height of guide tower (steel), 94 ft.; dimensions of chambers, two each, 140 ft. long by 33 ft. wide; depth of chambers, 9 ft. 10 ins.; approximate weight of water in each chamber, 1,385 tons; cost of structure, exclusive of concrete walls and breast walls, $298,000.

Postmaster-General Lemieux, who represented the Dominion Government at the opening, after referring to the development of canal navigation said: In our greatest chain of waterways, including our most costly and famous canals, those of Welland and Sault Ste. Marie, the minimum depth of water in the canals is 14 ft., and the breadth of the canals at the water surfaces averages 150 ft.; this throughout a system that extends for 1,225 miles from Montreal to the head of Lake Superior. In that great waterway there are no less than eight canals, those of Lachine, Soulanges, Cornwall, Farren's Point, Rapide Plet, Galops, Welland and Sault Ste. Marie, but their total length is only 73 miles, the Welland, 26 miles, being the longest, and the Sault, 1¼ miles, being the shortest. The magnificent locks at the several canals enable us to climb the 600 ft. that separate the level of the St. Lawrence at Three Rivers from that of Lake Superior. The climbing is actually done in 551 ft. of lockage, and the number of locks through which a vessel passes on its long journey is 48. The great Trent Canal system would give a continuous waterway of 200 miles, and would furnish a second great channel of trade between the east and west. The work already done had opened about 160 miles of direct and lateral navigation. The system included 14 locks, of which the average dimensions were 134 by 33 ft. The expenditure had been immense, but great results were looked for. The canals of Canada had cost the country $114,395,281, of which $94,000,000 had been spent in the 40 years since Confederation. During the last fiscal year the expenditure had been $2,758,022. With our policy of progress and development, I am able to say to you to-day that you may look forward to the completion of the Trent Canal system at an early date, but, in fact, even to-day, before the canal scheme is complete, all the cities and towns along its route are feeling the substantial benefit that comes from cheap transportation. Not only had the Government extended the canal system of the country, but it had abolished all tolls on the Government canals. The great canal system which had been built up would enable the older provinces to share in the prosperity of the newer. Do not believe that this achievement, considerable though it is, will be the last in this direction. We are only at the beginning of our expansion. We shall make history faster and faster as the century proceeds, and in no direction are more likely to move faster and with more advantage than in that of improved waterways. The Georgian Bay Canal scheme, of which we have been dreaming for the last two generations, is coming nearer and nearer. Canada is rapidly reaching a moment when, in the strength and pride

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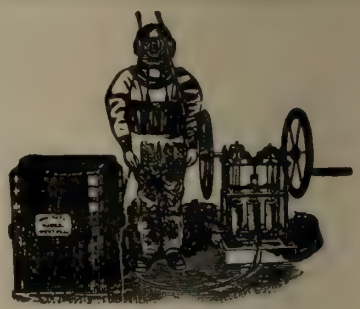

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of its youth it will be in a position to undertake even this gigantic work, and I do not doubt that those who are now middle-aged may live to see the day when the steamers of Liverpool and Glasgow will take their cargoes straight from Fort William and Port Arthur. That will be a development little dreamed of by our ancestors who planned the waterways we now use, yet the expansion of the West will, I am satisfied, be such that every new avenue of transportation will be needed before even with the utmost energy we can provide them. Canada's supremacy on the Great Lakes is as her very life-blood, and is surely an ambition worthy of our best energies.

Among the Express Companies.

The Canadian Ex. Co. is building a stable to accommodate 120 horses, in Chaboillez St., Montreal. The estimated cost is $120,000.

F. Smith, manager for Hamilton & Long, London, Ont., who was killed by the collapse of the adjacent store there, July 16, was formerly in the Canadian Ex. Co.'s service.

W. C. Muir, Auditor Canadian Northern Ex. Co., is making Toronto his headquarters at present while he is organizing the company's service on Mackenzie, Mann & Co.'s eastern lines.

The Canadian Northern Ex. Co. on July 15 started a service on the Quebec and Lake St. John Ry. with offices at Quebec, Indian Lorette, Valcartier, St. Catherines, Lake St. Joseph, St. Raymond, Allen's Mills, La Tuque Jct., La Tuque, Lake Edward, Chambord Jct., Roberval, St. Jerome, St. Gideon, Hebertville, Jonquiere, Chicoutimi. The Canadian Ex. Co is continuing to operate also on the Q. and L. St. J.R. for the present.

A circular has been sent by the Board of Railway Commissioners to the express and railway companies asking that a conference be arranged with the object of defining the division which should be made between express traffic and railway traffic. Under the Railway Act the Board is empowered to prescribe what is carriage or transportation of goods by express and the commissioners before undertaking to revise and approve the various express companies' tariffs are anxious to have a clear understanding of the term "express traffic."

The Canadian Northern Ex. Co. commenced July 15 operating on the Canadian Northern Quebec Ry's main line between Montreal and Riviere a Pierre Jct., and on the Joliette and St. Jerome branches, the Canadian Ex. Co. withdrawing. A city office has been opened at 22 Victoria Square, Montreal, with H. E. Baker as agent, M. Donelly has been appointed agent at Quebec. Offices have also been opened at Charlemagne, L'Assomption, L'Epiphanie, St. George, St. Jacques, Joliette, Ste. Elizabeth, St. Justin, St. Paulin, Charette Mills, St. Boniface, Shawinigan Falls, Grand Mere, Garneau Jct., St. Tite, St. Thecle, Hervey Jct., Lac aux Sables, Notre Dame des Anges, Riviere a Pierre Jct, Montcalm, Ste. Julienne, New Glasgow, Que. The Montford and Gatineau branch of the C.N.Q. R. is still served by the Dominion Ex. Co.

The following circular has been addressed to the express companies doing business in Canada by the Secretary of the Board of Railway Commissioners: "Under the Railway Act, Sec. 352, the Board is empowered to prescribe what is carriage or transportation of goods by express within the meaning of the act. I am directed to state that the Board thinks it would be advisable that 'Express Traffic' should be defined before the express companies' tariffs are approved by the Board, and that the Board desires to receive the views of the various companies interested as to the division which should be made between express traffic and ordinary railway traffic, and between the kinds of traffic to which express tariffs are to apply, and those to which railway tariffs are to apply. The Board desires that the companies give the Board the benefit of their views upon these matters on or before Sept. 1 next, and suggests that for the purpose, a conference might be had between the various interests and some attempt made to arrive at a harmonious settlement of these questions for submission to the Board."

Telegraph and Cable Matters.

The G.N.W. Telegraph Co. has closed its offices at Cornell, Finch, Springtown, Ont., and Lanoraie, Que.

W. J. Camp, Electrical Engineer C.P.R. Telegraph Department, is making his regular half-yearly inspection of the lines and offices of the system.

The accounts for the past financial year of the trans-Pacific cable have been adopted by the Board in London, Eng., but they have not yet been published.

The C.P.R. Telegraph Department is constructing a telegraph line to connect its system with the Marconi Wireless telegraph station at Chapel Hill, North Sydney, N.S.

J. H. Smart, who has retired from the position of Superintendent of the Commercial Cable Co., at New York, was for some time engaged as an operator in the Western Union Cable office at Canso, N.S.

The Marconi Wireless Telegraph Co. of Canada has issued a writ claiming $5,000 damages against C. Doutre, Superintendent Wireless Telegraphy for the Dominion Government, for alleged libel.

The Union Steamship Co.'s S.S. Camosun is the first vessel on the Pacific coast to be fitted with wireless telegraphy. The Dominion Government S.S. Quadra, and some of the other Dominion Government vessels, will also be similarly equipped.

The C.P.R. Telegraph Department is overhauling its line along the old Credit Valley Ry. in Ontario. The poles are being shortened, new poles being put in where necessary, and wider crossarms are being put up. This will provide for the stringing of additional wires in the future.

The Amalgamated Radio-Telegraphic Co., of London, Eng., expects to be in a position to have a station at Knockroe, Ireland, completed at an early date, and is negotiating for a site for a station in Canada. This, it is stated, may be erected this year, and if the tests are successful a regular business will be done. If sufficient business offers, the report states, a rate of 2c. a word can be made.

The Dominion Government steamship Montcalm sailed from Pictou, N.S., July 8, with the operators for the five Marconi wireless telegraph stations on the north shore of the St. Lawrence, in preparation for the opening of navigation by the Straits of Belle Isle. A site of 1½ acres has been secured at Comox, Vancouver Island, B.C., with an elevation of 120 ft. above sea level. It commands an unobstructed sweep of waters to the north and south. Stations are also to be established at Vancouver and Victoria.

J. D. Oppe, General Manager of the Marconi Wireless Telegraph Co., Montreal, has written a letter to the acting Minister of Marine, in which he claims that the Department since the beginning of the year has been violating the terms of the contract with the company, preventing it giving an efficient service, and from fulfilling contracts for the equipment of vessels with the company's wireless telegraph apparatus. Hon. W. Templeman denies that the Government is violating its contract, and further asserts that the Marconi Co. does not hold a monopoly of the wireless telegraph business in Canada to the exclusion of all other companies and all other wireless systems which it claims.

C. MacKay, President of the Postal Telegraph Cable Co., stated July 9, that all talk about that company and the Western Union Telegraph Co. working in harmony was nonsense. "If two companies," he added, "ever competed in the U.S., these two telegraph companies are competing, and always have been. At times the competition is even fierce and bitter. Every merchant and manufacturer in the U.S. wherever we reach, will bear witness of this statement. We are litigating with the W.U.T. Co. all over the country in regard to railroad rights of way. In fact, the tremendous fight between the Pennsylvania Rd. and the W.U.T. Co. was due solely to the fact that we got that business away from the W.U."

G. Marconi arrived at Sydney, N.S., July 10, and has been conducting experiments at the new wireless telegraph station at Glace Bay. An official statement as to the operation of the system across the ocean is expected to be made at an early date. Marconi said at Sydney, July 11: "We have had communications between Cape Cod and Poldhu, a distance of some 3,000 miles, and I have no doubt that we could reach Vancouver from Cape Breton, which is a greater distance. In this case the waves of communication would extend around the Arctic circle, making the actual distance shorter by at least 500 miles. I find to-day, that we can do all we did before, only we can do it better. There are now about 25 wireless stations in British North America. Not the least important is the service between Prince Edward Island and the mainland, which handled 10,000 messages last winter while the cable was out of order. Cape Sable is handling about 800 ships' messages a week."

Railway Telegraph Superintendents.

The 26th annual convention of the Association of Railway Telegraph Superintendents was held at Atlantic City, N.J., June 19, and two following days. W. J. Camp, Electrical Engineer C.P.R. Telegraphs, Montreal, was the only Canadian official present. After the transaction of routine business H. C. Hope, of St. Paul, read a paper on the "Education of Telegraphers in Railway Work," the discussion following being taken part in by W. J. Camp, who described the methods pursued by the C.P.R. in the instruction and training of telegraph operators. At the afternoon session papers were read by F. Bentley, on the "Superintendent of Telegraph, What He Is, and What He Is Not," and by J. D. Taylor, on "Inductive Disturbances to Telegraph Wires caused by High-Tension Lines Paralleling Railway Rights of Way." A paper on "Inductive and other Foreign Disturbances to Telegraph Lines," prepared by W. C. Stowell, Chicago, was read by E. Parsons. These were followed by interesting discussions. "Wireless Telegraphy" was the subject of a paper submitted by W. Maver, Jr., New York. On the second day a paper by L. Van Aiken, Jr., New York Central Lines, on "Maintenance and Operation of Telephone Service on Railway Lines," was read, and in the course of the discussion W. J. Camp referred at length to the telephone system in use on the C.P.R., which was giving general satisfaction.

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"Experiments with Concrete Poles" was the subject of a paper contributed by G. A. Cellar, of the Pennsylvania Lines west of Pittsburg. W. J. Camp, in the course of the discussion, stated that so far as Canada was concerned there was still an ample supply of cedar poles obtainable at extremely reasonable prices, and he did not think that concrete poles would find a market in Canada for some years to come, except, perhaps, in some of the thickly settled districts in the eastern portion of the Dominion. He gave some interesting particulars regarding the building of telegraph lines by the C.P.R. On the 11,000 miles of railroad owned by this company, all of which was equipped with telegraph lines, every pole being cedar. Prices of poles were, however, advancing because of the great demand from the U.S. On the western prairies the C.P.R. had to haul poles in some cases 550 miles. Thirty-foot poles now cost $1.30 on the cars at points on the Atlantic Division of the road; $1.50 on the Lake Superior Division; $1.85 on the Central Division, and $1.20 on the Pacific Division. Experiments with preservatives have proved too costly to be continued. The life of cedar poles was extremely variable. On lines erected in 1877 about half of the poles were still good for a few years' more service.

Other papers read at the second day's session were "Dry Batteries," by N. J. Fry, Milwaukee, Wis., and "Opportunities in the Telegraph Service," by G. W. Dailey, Chicago. On the third day a paper was read by Q. M. Jones, Topeka, Kan., on "Wire Testing," and it was decided to print in the proceedings a number of other papers for the reading of which there was no time. These included one on "Standard Time," by W. J. Camp, and one on "Visible Supply of Telegraph Poles," by W. W. Ashald, G.T.R., Montreal. The committees on wire crossing, uniform pole construction and uniform transfer blanks reported.

The convention decided in favor of holding quarterly meetings and committees were appointed to have charge of the meetings east and west. Montreal was selected as the place for holding the annual convention of 1908, and W. J. Camp was elected Vice-President.

Dominion Telegraph Company.

The following financial statement for the year ended June 30, 1907, was presented at the annual meeting in Toronto, July 10:

ASSETS.

Capital expenditure	$1,281,819.47
Toronto, Grey and Bruce Ry. Co. 1983 bonds, and interest thereon	1,596.24
Cash in bank and on hand	28,630.39
	$1,312,046.10

LIABILITIES.

Capital stock paid up	$1,000,000.00
Dividends unclaimed	1,538.45
Dividend 124, payable July 15, 1907	15,000.00
Suspense	47.13
	$1,016,585.58
Balance at credit of profit and loss	295,460.52
	$1,312,046.10

The directors reported the regular payment, quarterly in advance, for the past 28 years, of the guaranteed interest of 6% per annum on the capital stock of the company, by the lessees, the Western Union Telegraph Co., up to and including June 30, 1907, which interest has been duly distributed quarterly to the shareholders of the Dominion Co.; said lease being for 99 years, from July 1, 1879.

Following are the officers and directors for the current year: President, T. Swinyard; Vice-President, Sir Henry M. Pellatt; other directors, B. Brooks, F. F. Clark, Col. R. C. Clowry, Æ. Jarvis, C. O'Reilly, H Pellatt, A. G. Ramsay; Secretary and Treasurer, F. Roper.

General Telephone Matters

The construction of a telephone line between East Dover, Terrance Bay and Lower Prospect, N.S., has been decided upon.

The B. C. Telephone Co.'s office in New Westminster, B.C., has been remodelled. A new switchboard to add 420 new instruments to the present board is being installed.

The Fort William, Ont., City Council has passed a by-law providing for the raising of $94,000 by debentures, for various purposes, including the expenditure of $36,000 upon the civic telephone system.

The Winnipeg City Council has passed a resolution asking the Board of Railway Commissioners to order the Bell Telephone Co. to put its wires underground in the districts in which the city proposes to lay conduits.

The Eastview Telephone Co., with office at the residence of R. M. Johnston, S. W. ¼ of 28-17-24w2, has been incorporated at Regina, Sask., under the North-West Territories ordinance respecting joint stock companies.

F. Dagger, who has been acting as telephone expert for the Government of Manitoba, in connection with the establishment of a provincial telephone system, has resigned to take a similar appointment for the Saskatchewan Government.

The Board of Railway Commissioners having completed its investigation at Montreal into the Bell Telephone Co.'s rates there, opened its sittings at Winnipeg, July 10, to investigate matters affecting the company's operations in the west.

The building which the Manitoba Government proposes to erect as an exchange for the local and long distance telephone lines at Brandon, will be of brick, 40 by 60 ft., three stories high, and will be equipped for an exchange of 500 phones.

The British Columbia Telephone Co. has purchased a 50 ft. lot on Clarkson st., New Westminster, B.C., upon which it will erect a two-storey brick building for its exclusive use. W. Farrell is President and G. H. Halse, Secretary of the company.

The head office of the New Brunswick Telephone Co. has hitherto been at Fredericton, where all the company's corporate business was transacted. Since the amalgamation with the Central Telephone Co. it has been decided, while retaining the head office nominally at Fredericton, to transact the business of the company at St. John.

The Brougham and Grattan Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $5,000 and offices at Dacre, Ont., to carry on a general telephone business within the townships of Brougham and Grattan, Ont. The provisional directors are: J. Legree, P. Bradley, of Brougham tp.; R. Steele, J. Livingstone, W. A. Hurd, of Grattan tp.

The King Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Temperanceville, Ont., for the purpose of carrying on a general telephone business within the county of York. The provisional directors are: T. H. Legge, W. H. Glass, A. Wells, G. D. Lockhart, of King tp., Ont.; and W. H. Legge, of Vaughan tp., Ont.

The Alberta Department of Public Works has under construction five long distance telephone lines: Edmonton to Lloydminster, Wetaskiwin to Daysland, Lacombe to Stettler, Blairmore to Calgary, and Calgary to Banff. As soon as the lines are completed to any town an office is being opened, equipment installed, and business started. Seventy-five men are engaged on construction.

A. T. Presson, Superintendent and Engineer of the National Telephone Co., has been in Quebec, since May, making plans for a new telephone system. The new exchange will have underground wires and will connect with the 115 exchanges of the Bellechasse Telephone Co. The switchboard will be fitted for 4,000 instruments, and the system will cost $400,000. Tenders have been invited and bids are required to be in by Sept 1.

The Farmers' Telephone Co. has been established on a co-operative basis in Delta, B.C. The company is completing a line with 25 miles of poles and 90 subscribers, and was in operation early in July. Each subscriber is taking $30 in shares, and is to pay 75 cents a month for the service. The central office is at Ladner, and the officers are: President, W. McKenzie, Woodwards; Vice-President, H. M. Vasey; Secretary, Dr. Traynor, Steveston, B.C.

The Dominion Coal Co. is asking the Nova Scotia Courts for an injunction to prevent the Eastern Telephone Co. cutting off the coal company's service. The coal company maintains a private telephone exchange. It had a contract with the telephone company for a connection which expired in June, 1906. Some correspondence took place which the coal company contends resulted in the renewal of the contract, while the telephone company contends that there was no renewal.

The Telephone Co. of Prince Edward Island is completing a new line from Souris to East Point, adding several miles of wire in Souris East and Souris West. Tenders have been called for a new brick exchange, 30 by 38 ft., in Charlottetown, where a central energy switchboard will be installed. It is also contemplated to construct a new line from Cardigan to Woodville Mills; reconstruct the Cardigan-Montague line, and complete the metallic circuit between Charlottetown and Summerside.

A recent article in the Toronto Globe says there are now rural telephone lines six miles south, and 12 miles north of Barrie, Ont. In some cases the lines are owned by the farmers themselves, who pay $5 a year for connection with the Bell Telephone Co.'s switchboard in Barrie; while in other instances a flat rate of $25 a year is being paid. One man has secured telephone rights in three townships. If the proposition of construction in these townships turns out as at present planned, Simcoe will be ahead of most other counties in this respect.

Wireless telephony, reports from London, Eng., state, has been making steady progress of late, although its achievements are still far behind those of wireless telegraphy. The range of practicable wireless telephony is as yet only 10 miles or so. Telephonic conversation has never yet been successfully carried to a distance of 100 miles of submarine cable under the ocean; the limiting telephonic range over such cables has been about 60 miles. Wire telephony is commercially practised up to distances of 1,500 miles, and is capable of being extended by sufficient expenditure on the wires to 2,500 miles or even more.

The New Brunswick Telephone Co. and the Central Telephone Co. amalgamation was completed at the annual meeting of the former company at Fredericton, N.B., June 26. The capital stock of the amalgamated companies is $830,000, of which $370,000 is held by shareholders of the old Central Telephone Co. Of the $460,000 of stock representing the capital of the old N.B.T. Co., about one-third is held by the Bell Telephone Co. The amalgamated company has power to increase its capital to $2,000,000. Following are the officers and managing committee: President, S. H. White; First Vice-President, Senator Thompson; Second Vice-President, F. B. Black; Secretary-Treasurer, A. Seeley; managing committee: Senator Thompson, H. P. Robinson, H. C. Read, and F. B. Black, with the President, ex-officio.

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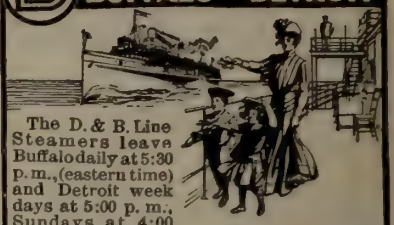

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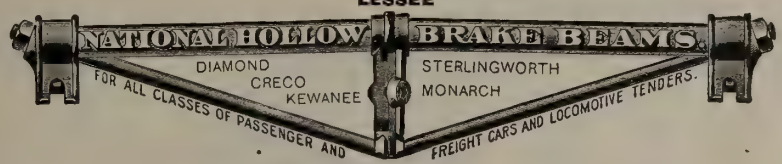

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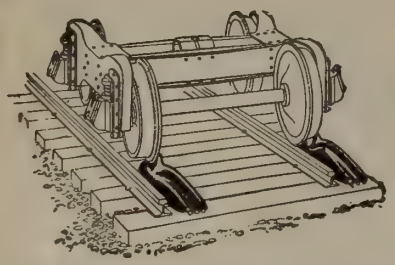

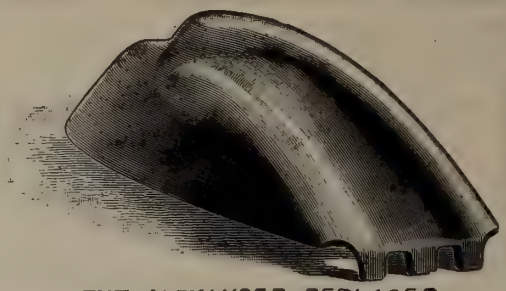

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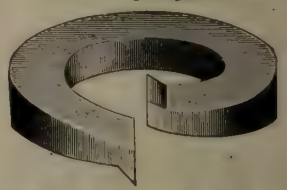

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Independent Pneumatic Tool Co.....Chicago, Ill.

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Chicago Pneumatic Tool Co.....Chicago, Ill.

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Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Twist
Baldwin Steel Co.....New York.

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Toronto Pressed Steel Co.....Toronto.

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Soule Raw Hide Lined Dust Guard Co., Boston.

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American Brake Shoe & F'dry Co..Mahwah, N.J.

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E. F. Dartnell.....Montreal.
Dominion Bridge Co.....Montreal.
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Robb Engineering Co.....Amherst N.S.

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E. Leonard & Sons.....London, Ont.
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Canadian Fairbanks Co.....Montreal.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.

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M. Beatty & Sons.....Welland, Ont.

Engines, Stationary and Marine
Canada Foundry Co.....Toronto.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst N S.

Excavators
Vulcan Iron Works.....Toledo, Ohio.

Explosives
Standard Explosives Limited.....Montreal.

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Acton Burrows Limited.....Toronto.

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Canadian Fairbanks Co.....Montreal.
Robb Engineering Co.....Amherst, N.S.

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Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

Fence Posts, Preservative
Carbolite Carbolineum Co.....Toronto.

Fire Brick
W H. C. Mussen & Co.....Montreal.
F. B. Stevens.....Detroit, Mich.

Fire Clay
F. B Stevens.....Detroit, Mich.

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Chicago Pneumatic Tool Co.....Chicago, Ill.

Flue Rolling Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

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Canada Car Co., Limited.....Montreal
Crossen Car Mfg. Co.....Cobourg, Ont.
Hamilton Steel & Iron Co., Ltd...Hamilton, Ont.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
Canadian Steel and Wire Co.....Hamilton, Ont.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co...Owen Sound, Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

Gauges, Locomotive Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

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Wolfe Brush Co.....Pittsburg, Pa.

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John S. Metcalfe Co.....,Chicago, Ill.

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James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....
Rice Lewis & Son.....Toronto.

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg, Ont.

Hoisting Machinery
Brown Hoisting Machinery Co....Cleveland, Ohio.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill
Independent Pneumatic Tool Co.....Chicago, Ill

Hollow Staybolt Iron and Steel Bars
Falls Hallow Staybolt Co..Cuyahoga Falls, Ohio.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

Hose, Air Brake and Steam
G. S. Wood.....Chicago, Ill.

Hose, Suction
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspections
R. W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron and Steel Bars
Hamilton Steel & Iron Co., Ltd...Hamilton, Ont.

Iron, Bar
Homer Taylor.....Montreal.

Iron, Pig
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
McCord & Co.....Chicago, Ill.

Kalsomine Brushes
Wolfe Brush Co.....Pittsburg, Pa.

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E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

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Canadian Fairbanks Co.....Montreal.
Homer Taylor.....Montreal.

Locomotives (Compressed Air)
Canadian Locomotive Co.....Kingston, Ont.
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H. K. Porter Co.....Pittsburg, Pa.

Locomotives (Electric)
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.
Flannery Bolt Co.....Pittsburg, Pa.

Lubricators
McCord & Co.....Chicago, Ill
Homer Taylor.....Montreal.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery, Power
Jno. McDougall,Caledonian IronWorks Co.Montreal

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.

Motors
McCord & Co.....Chicago, Ill.

Motors (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co.....Newark N.J.

Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tanks
S. F. Bowser & Co. Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
N. J. Holden Co.....Montreal.
Independent Pneumatic Tool Co....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Limited.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada.....Montreal.
N. J. Holden Co.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Machines
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkeville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scale Boxes
Cyclopean Iron Works Co.....Jersey City, N.J.

Scrapers (Wheel and Drag)
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

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O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.

Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

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Dominion Car and Foundry Co.....Montreal

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The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Skips
Cyclopean Iron Works Co.....Jersey City, N.J.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J. Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. C. Torbert & Co.....Chicago, Ill.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co. Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
N. J. Holden Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-Anderson Valve Specialty Co., Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-Anderson Valve Specialty Co, Pittsburg, Pa.

Valves, Angle
Golden-Anderson Valve Specialty Co., Pittsburg, Pa.

Valves, Automatic Float
Golden-Anderson Valve Specialty Co., Pittsburg, Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-Anderson Valve Specialty Co., Pittsburg, Pa.

Valves, Cushioned, non-return
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TORONTO, CANADA, SEPTEMBER, 1907.

For Subscription Rates, See page 673.

PENNY FARES ON THE G.T.R.

The Chief Railway Commissioner, A. C. Killam, has delivered the following judgment in the case of Robertson vs. the Grand Trunk Ry. Co.:

This is an application for an order directing the G.T.R. Co. of Canada to issue third-class tickets at the rate of one penny per mile for each mile travelled, and directing the company to provide at least one train having in it third-class carriages which shall run every day throughout the length of its line. The application is based upon a clause in the original Act of Incorporation of the G.T.R. Co. of Canada, 16 V., c. 37, passed by the Parliament of the Province of Canada in 1852. Section 3 of that Act was as follows:

"3. And be it enacted, that the gauge of the said railway shall be 5 ft. 6 ins., and the fare of charge for each first-class passenger by any train on the said railway, shall not exceed two pence currency for each mile travelled, the fare or charge for each second-class passenger by any train on the said railway shall not exceed one penny and one halfpenny currency for each mile travelled, and the fare or charge for each third-class passenger by any train on the said railway, shall not exceed one penny currency for each mile travelled, and that, at least, one train having in it third-class carriages shall run every day throughout the length of the line."

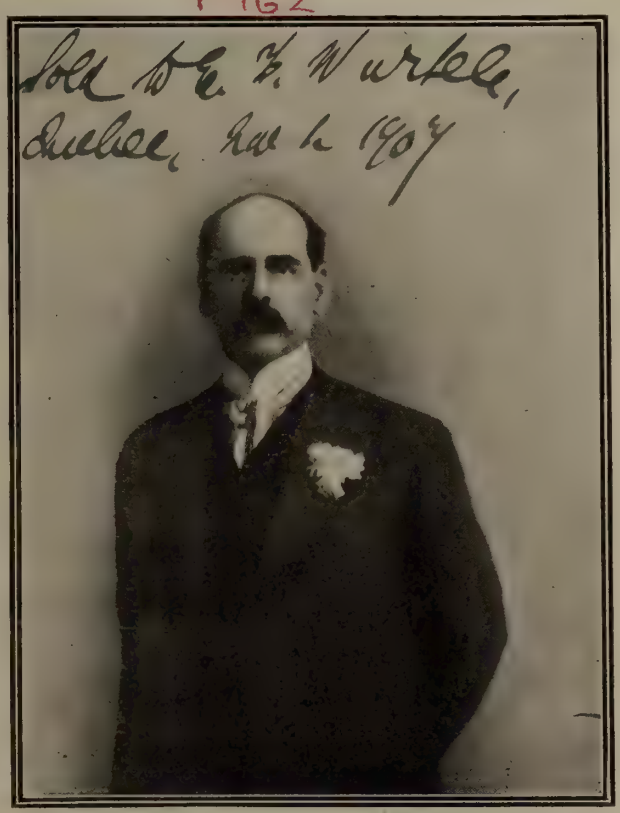
The portion dealing with the gauge of the railway was repealed by Act of the Parliament of Canada, 36 V., c. 18, s. 23. None of the remainder of the section has ever been expressly repealed; and, if it still remains in force, the Board is bound, under the general jurisdiction given by section 26 of the Railway Act, to order and require a railway company to do any act, matter or thing which such company is or may be required to do under its special Act, to make the order applied for.

The contention on the part of the company is that the provisions in question have been impliedly repealed by subsequent legislation. Section 2 of the special Act was as follows:

"2. And be it enacted, That the several clauses of The Railway Clauses Consolidation Act, with respect to the 1st, 2nd, 3rd and 4th clauses thereof, and also the several clauses of the said Act with respect to 'Interpretation,' 'Incorporation,' 'Powers,' 'Plans and Surveys,' 'Lands and their Valuation,' 'Highways and Bridges,' 'Fences,' 'Tolls,' 'General Meetings,' 'Directors, their election and duties,' 'Shares, and their Transfer,' 'Municipalities,' 'Shareholders,' 'Actions for indemnity, and fines and penalties and their prosecutions,' 'Working of the Railway,' and 'General Provisions,' shall be incorporated in this Act with the following modification for the ninth provision in the clause of the said Act, with respect to 'Plans and Surveys' . . . . . and with the further exception of any enactments in the said clauses which may be inconsistent with the express provisions and enactments of this Act, in like matters; and the expression "this Act" when used herein shall be understood to include all the clauses of The Railway Clauses Consolidation Act which are incorporated with this Act."

The clauses with respect to "Tolls" in the Railway Clauses Consolidation Act, 14 and 15 V., c. 51, were contained in section 14 of that Act, and were, so far as of present importance, as follows:

"Tolls shall be from time to time fixed and regulated by the by-laws of the company or by the directors if thereunto authorized by the by-laws or by the shareholders at any general meeting, and shall and may be demanded and received for all passengers and goods transported upon the railway or in the steam vessels to the undertaking belonging . . . . . 'And all or any of the said tolls may by any by-law be lowered and reduced and again raised as often as it shall be deemed necessary for the interests of the undertaking:



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Provided that the same tolls shall be payable at the same time and under the same circumstances upon all goods and persons, so that no undue advantage, privilege or monopoly may be afforded to any person or class of persons by any by-laws relating to the tolls.' . . . . . 'No tolls shall be levied or taken until approved of by the Governor-in-Council, nor till after two weekly publications in The Canada Gazette of the by-laws establishing such tolls, and of the order-in-council approving thereof.' . . . . . 'Every by-law fixing and regulating tolls shall be subject to revision by the Governor-in-Council from time to time after approval thereof as aforesaid.'"

The same provisions respecting tolls appeared in the Consolidated Statutes of Canada, c. 66; and by section 2 of that Act, "when not otherwise expressed, this and the following sections to the 125th section shall apply to every railway authorized to be constructed by any act passed since the 30th day of August, 1851;.....and this Act shall be incorporated with every such act, and all the clauses and provisions in this Act, unless they are expressly varied or excepted by any such act, shall apply to the undertaking authorized thereby, so far as applicable to the undertaking, and shall, as well as the clauses and provisions of every other act incorporated with such act, form part of such act and be construed together therewith as forming one act."

This legislation of the Province of Canada remained in force until the formation of the Dominion of Canada.

In 1868, in the first session of the first Parliament of the Dominion, was passed "The Railway Act, 1868," in sec. 12 of which were embodied the provisions just mentioned respecting tolls, with the following addition:

"12. No by-law of any railway company by which any tolls are to be imposed or altered, or by which any party other than the members, officers and servants of the company are intended to be bound, shall have any force or effect until the same has been approved and sanctioned by the Governor-in-Council."

The last mentioned Act did not in terms repeal the previous railway legislation of the Province of Canada, and it does not appear to have had any application to the G.T.R., as the clauses dealing with its application made it apply to railways thereafter to be constructed under the authority of any act passed by the Parliament of Canada.

The Act of 1868 remained in force until 1879, when it was replaced by the Consolidated Railway Act, 1879. That Act provided that the provisions of the Act from sec. 5 to sec. 34, both inclusive, should "apply to every railway constructed or to be constructed under the authority of any act passed by the Parliament of Canada, and shall, so far as they are applicable to the undertaking, and, unless they are expressly varied or excepted by the special act, be incorporated with the special act, form part thereof, and be construed therewith as forming one act."

By section 102 of the Act of 1879, the Railway Act, 1868, and various acts amending it, were expressly repealed; but, again, no mention was made of the Act contained in the Consolidated Statutes of Canada.

In sec. 17 of the Act of 1879 were again embodied the before-mentioned provisions respecting tolls, including the addition made in 1868. By sub-section 6, "All or any of the tolls may, by any by-law, be reduced and again raised as often as deemed necessary for the interests of the undertaking; but the same tolls shall be payable at the same time and under the same circumstances upon all goods and by all persons, so that no undue advantage, privilege or monopoly may be afforded to any person or class of persons by any by-law relating to the tolls."

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By the Act of 1883, 46 Vict., c. 24, s. 12, sub-section 6 of sec. 17 of the Consolidated Railway Act, 1879, was repealed and the following substituted therefor:

"And whereas, it is expedient that a railway company should be enabled to vary the tolls upon the railway so as to accommodate them to the circumstances of the traffic, but that such power of varying should not be used for the purpose of prejudicing or favoring particular persons, or for the purpose of collusively and unfairly creating a monopoly, either in the hands of the company or of particular persons, therefore it shall be lawful for the company, subject to the provisions and limitations herein and in their special act contained, from time to time to alter or vary the tolls by the special act authorized to be taken, either upon the whole or upon any particular portions of the railway as they shall think fit; Provided that all such tolls be, at all times and under the same circumstances, charged equally to all persons, and after the same rate, whether per ton, per mile or otherwise, in respect of all passengers and of all goods or carriages of the same description, and conveyed or propelled by a like carriage or engine, passing only over the same portion of the line of railway; and no reduction or advance in any such tolls shall be made, either directly or indirectly, in favor of or against any particular company or person travelling upon or using the railway."

While sec. 6 of the Act of 1883 declared certain lines of railway, among others the G.T.R., to be works for the general advantage of Canada, and provided that, "3. Railway companies by this Act brought within the legislative authority of Parliament shall have one year from the passing hereof within which to comply with the provisions of sub-sec. five, sec. 15, of the Consolidated Railway Act, 1879, and sec. 1 of the Act of 1883, made secs. 48 and 49 of the Consolidated Railway Act, 1879, applicable to every railway (except Government railways) and railway company subject to the legislative authority of the Parliament of Canada." The Act of 1879 was not otherwise made generally applicable to the G.T.R. or to railways constructed under authority of the Parliament of Canada.

In 1886, upon the coming into force of the Revised Statutes of Canada, another act, cap. 109, known as The Railway Act, was substituted for the previous general railway acts of the Dominion. By sec. 3 of that Act, part 1, containing the sections numbered from 4 to 39 inclusive, was made applicable "to every railway constructed or to be constructed under the authority of any act passed by the Parliament of Canada." Part 2 was made applicable "to all railway companies and railways within the legislative authority of the Parliament of Canada, except Government railways"; and part 3, "to all railway companies operating a line or lines of railway in Canada, whether otherwise within the legislative authority of the Parliament of Canada or not." In sec. 16 (included in part 1) of that Act were embodied the previous provisions respecting tolls, with the amendment made by the Act of 1883. The General Railway Act of the Province of Canada, C.S.C., c. 66, was not among the acts repealed upon the coming into force of the Revised Statutes

In 1888 another act, known as The Railway Act, 51 Vic., cap. 29, was substituted for the R.S.C., cap. 109, which was then repealed. By sec. 2, sub-sec. t, the expression "special act" means any act under which the company has authority to construct or operate a railway, or which is enacted with special reference to such railway, and includes all such acts. By sec. 3, "This Act, subject to any express provisions of the special act, and to the exception hereinafter mentioned, applies to all persons, companies and railways within the legislative authority of the Parliament of Canada, except Government railways." By sec. 6, "If in any special act it is provided that any provisions of any general railway act in force at the time of the passing of the special act is execpted from incorporation therewith, or if the application of any such provision is extended, limited or qualified, the corresponding provision of this Act shall be excepted, extended, limited or qualified in like manner." By sec. 223, "Subject to the provisions and restrictions in this and in the special act contained, the company may, by by-laws, or the directors, if thereunto authorized by the by-laws, may from time to time, fix and regulate the tolls to be demanded and taken for all passengers and goods transported upon the railways, or in steam vessels belonging to the company." By sec. 227, "No tolls shall be levied or taken until the by-law fixing such tolls has been approved of by the Governor-in-Council, not until after two weekly publications in The Canada Gazette of such by-law and of the order-in-council approving thereof; nor shall any company levy or collect any money for services as a common carrier except subject to the provisions of this Act." By sec. 228, "Every by-law fixing and regulating tolls shall be subject to revision by the Governor-in-Council, from time to time, after approval thereof; and after an order-in-council altering the tolls fixed and regulated by any by-law, has been twice published in The Canada Gazette, the tolls mentioned in such order-in-council shall be substituted for those mentioned in the by-law, so long as the order-in-council remains unrevoked."

The Act of 1888 was repealed upon the coming into force of the Railway Act, 1903, which substituted the Board of Railway Commissioners for the Governor-General-in-Council as the authority having jurisdiction to approve and revise the tolls of railway companies, and which made important changes in regard to railway tariffs. The following provisions of that Act are important:

"3. This Act shall apply to all persons, companies and railways (other than Government railways) within the legislative authority of the Parliament of Canada, and shall be incorporated and construed as one Act, with the special act subject as herein provided."

"4. Any section of this Act may, by any special act passed by the Parliament of Canada, be excepted from incorporation therewith, or may thereby be extended, limited or qualified. It shall be sufficient, for the purposes of this section, to refer to any section of this Act by its number merely."

"5. If in any special act heretofore passed by the Parliament of Canada it is enacted that any provision of the General Railway Act in force at the time of the passing of such special act, is excepted from incorporation therewith, or if the application of any such provision is, by such special act, extended, limited or qualified, the corresponding provision of this Act shall be taken to be excepted, extended, limited or qualified in like manner; and, unless otherwise expressly provided in this Act, where the provisions of this Act and of any special act passed by the Parliament of Canada relate to the same subject-matter, the provisions of the special act shall be taken to override the provisions of this Act in so far as is necessary to give effect to such special act."

"6. Where any railway, the construction or operation of which is authorized by a special act passed by the Legislature of any Province, is declared, by any special act of the Parliament of Canada, to be a work for the general advantage of Canada, this Act shall apply to such railway, and to the company constructing or operating the same, to the exclusion of such of the provisions of the special act of the Provincial Legislature as are inconsistent with this Act, and in lieu of any general railway act of the Province."

"251. The company or the directors of the company, by by-law, or any such officer or officers of the company as are thereunto authorized by by-law of the company or directors, may from time to time prepare and issue tariffs of the tolls to be charged, as hereinafter provided, for all traffic carried by the company upon the railway, or in vessels, and may specify the persons to whom, the place where, and the manner in which, such tolls shall be paid.

"(2) All such by-laws shall be submitted to and approved by the Board.

"(3) The Board may approve such by-laws in whole or in part, or may change, alter or vary any of the provisions therein.

"(4) No tolls shall be charged by the company until a by-law authorizing the preparation and issue of tariffs of such tolls has been approved by the Board, nor shall the company charge, levy or collect any money for any services as a common carrier, except under the provisions of this Act."

"256. All tariff by-laws and tariffs of tolls shall be in such form, size and style, and give such information, particulars and details, as the Board may, by regulation, or in any case, prescribe."

"257. The Board may disallow any tariff or any portion thereof which it considers to be unjust or unreasonable, or contrary to any of the provisions of this Act, and may require the company, within a prescribed time, to substitute a tariff satisfactory to the Board in lieu thereof, or may prescribe other tolls in lieu of the tolls so disallowed, and may designate the date at which any tariff shall come into force.

"(2) Any tariff in force (except standard tariffs, hereinafter mentioned) may, subject to disallowance or change by the Board, be amended or supplemented by the company, by tariffs, in accordance with the provisions of this Act."

"263. The tariffs of tolls which the company shall be authorized to issue under this Act for the carriage of passengers between points on the railway shall be divided into two classes, namely: The maximum mileage tariff, herein referred to as the standard passenger tariff; and reduced passenger tariffs, herein referred to as special passenger tariffs.

"(2) The standard passenger tariff shall specify the maximum mileage tolls to be charged for passengers for all distances covered by the company's railway; such distances may be expressed in like manner as provided herein in respect of standard freight tariffs.

"(3) Special passenger tariffs shall specify the toll or tolls to be charged by the company for passengers in every case where such tolls are lower than the tolls specified in the company's standard passenger tariff."

"264. A standard passenger tariff shall be filed, approved and published in the same manner as required by this Act in the case of a freight standard tariff.

"(2) Until the company files its standard passenger tariff and such tariff is so approved and published in The Canada Gazette, no tolls shall be charged by the company.

"(3) When the provisions of this section have been complied with, and except in the case of special passenger tariffs, the tolls in the standard passenger tariff shall be the only tolls which the company is authorized to charge for the carriage of passengers."

"265. All special passenger tariffs shall be filed by the company with the Board, and published as required by sec. 274, three days before any such tariff is intended to take effect, or within such time, or in such manner, as the Board, owing to the exigencies of competition or otherwise, may require. The date of the issue and the date on which, and the period, if any, during which, any such tariff is intended to take effect, shall be specified thereon.

(2) Upon any such tariff being so duly filed the company shall, until such tariff is superseded or is disallowed by the Board, charge the toll or tolls as specified therein, and such tariff shall supersede any preceding tariff or tariffs, or any portion or portions thereof, in so far as it reduces or advances the tolls therein, but until such tariff is so duly filed, no such toll or tolls shall be charged by the company."

Sec. 214 required every railway company to furnish adequate and suitable accommodation for receiving, loading, carrying, unloading and delivering traffic, and to furnish and use all proper appliances, accommodation and means necessary therefor; and sec. 253 required it to afford to all persons all reasonable and proper facilities for the receiving, forwarding and delivering of traffic. Sec. 14 also gave to the Board power, where the required accommodation was not furnished, to order the company to furnish the same; and an amending act, passed in 1906, 6 Ed. 7, c. 42, s. 23, gave the Board power to order that specific works be constructed or carried on, or specified steps, systems, or methods taken. Sec. 212, s.-s. 2, of the Act of 1903, empowered the Board to make regulations "providing for the protection and safety of the public, of property, and of the employes of the company with respect to the running and operation of trains by the company," which provision was amended by the Act of 1906, s. 18, so as to authorize the Board to make regulations "generally for the protection of property and the protection, safety, accommodation and comfort of the public and the employes of the company in the running and operation of trains by the company." All of the before-mentioned provisions of the Act of 1903, with the amendments, are embodied in the present Railway Act, R.S.C., c. 37.

It appears to me that neither the Act of 1868, nor that of 1879, nor part 1 of the Act in the Revised Statutes, nor the amendments of either (except in some particulars not material to the present application), applied to the G.T.R. Co. By the terms of the principal acts, they were to apply only to railways constructed under the authority of an act passed by the Parliament of Canada; and I agree with Mr. Nesbitt's contention that the Parliament of the former Province of Canada was not included. Some

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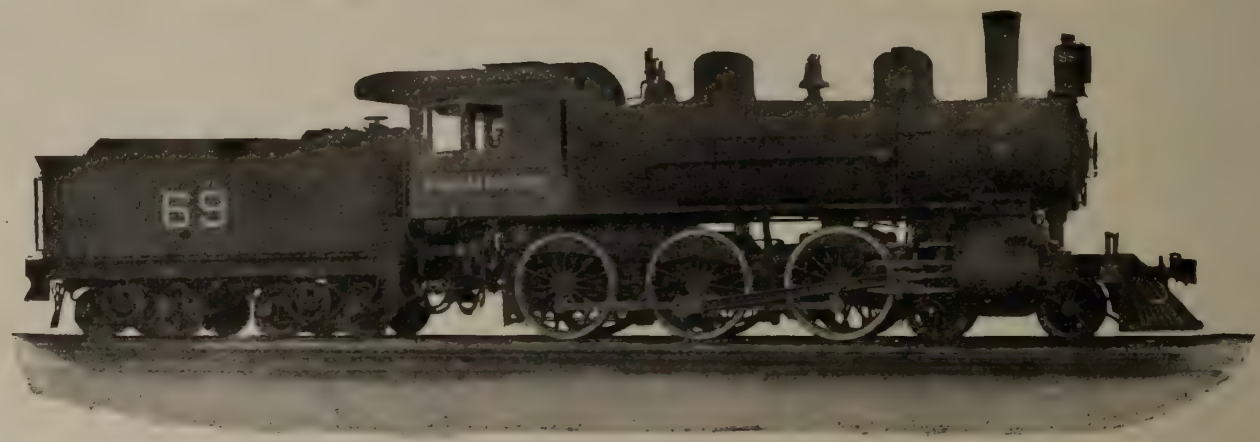

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amendments extended the application of particular provisions. See 38 V., c. 24, s. 4 (1875), and 46 V., c. 24, s. 12 (1883). This view appears to be supported by the decisions in Scott v. G.W.R. Co., 23 U.C.C.P. 182; Allan v. G.W.R. Co., 33 U.C.R. 483; re St. Catharines and Niagara C.R. Co. and Barbeau, 15 O.R., 583; Toronto Belt Line R. Co. v. Lander, 19 O.R. 607, and by the language of Burton, J., in Bowen v. C.S.R. Co., 14 A.R. 1.

The Act of 1888 was, by its terms, applicable to all persons, companies, and railways within the legislative authority of the Parliament of Canada, except government railways. These terms clearly included the G.T.R. Co. and its lines of railway; but this was "subject to any express provisions of the special act," and sec. 6 further indicated that the special act was to govern. Further, sec. 223, which authorized the company or the directors to fix and regulate the tolls, did so subject to the provisions and restrictions in this and in the special act contained." What I have said is sufficient to dispose of the contention that the amending Act of 1883 affected the limitation imposed by the company's special act; but it is to be noticed that the powers of the company were, under that Act, to be exercised "subject to the provisions and limitations hereinafter and in their special Act contained." While not material to the construction of the amendment, it is interesting to note that, as shown by the Hansard report of the discussion in Parliament, the amendment of 1883 was introduced by Mr. McCarthy, M.P., for the purpose of making the provision against discrimination more clear.

In my opinion, therefore, the clause requiring the running of third-class carriages and limiting third-class fares was not affected by any legislation prior to the Act of 1903. As has been said, the provisions of the special Act have not been expressly repealed. None of the enactments in the Railway Act, 1903, or in the present Railway Act, are explicitly inconsistent with those provisions. The contention on the part of the railway company is that, in effect, those enactments, and particularly the portions relating to tolls and those giving the Board jurisdiction respecting the accommodation, etc., to be furnished by the company, are so inconsistent as impliedly to repeal the provisions of the special Act.

"If two inconsistent acts be passed at different times, the last is to be obeyed; and if obedience cannot be observed without derogating from the first, it is the first which must give way." Per Lord Langdale, M.R., in Dean of Ely v. Bliss, 5 Beav. at p. 582. But a "repeal by implication is never to be favored." Per Field, J., in Dobbs v. Grand Junction W. W. Co., 9 Q.B.D. at p. 158.

"We ought not to hold a sufficient act repealed, not expressly as it might have been, but by implication, without some strong reason." Per Lord Bramwell, in G.W.R. Co. v. Swindon and Cheltenham R. Co., 9 A.C. at p. 809.

"A later act of Parliament hath never been construed to repeal a prior act, without words of repeal, unless there be a contrariety and repugnancy between them, or at least some notice taken of the former law in the subsequent one, so as to indicate an intention in the law-makers to repeal it." Per Lord Hardwicke, L.C., in Middleton v. Crofts, 2 Atk. 650.

"The court must be satisfied that the two enactments are inconsistent before they can from the language of the later imply a repeal of an express prior enactment." Per Byles, J., in Conservators of the Thames v. Hall, L.R., 3 C.D., at p. 419; and in the same case Keating, J., said (p. 420): "I entirely agree with my Brother Byles, that, before we come to that conclusion, we are bound to satisfy ourselves that it is a necessary implication."

"When the repeal is not express, the burden is on those who assert that there is an implied repeal to show that the two statutes cannot stand consistently the one with the other." Per Chitty, J., in Lybbe v. Hart, 29 Ch.D. 8.

"The intention to repeal must appear even more strongly where the first provision is contained in a statute of a private or special nature, in which case the maxim generalia specialibus non derogant usually prevails. "A later statute in the affirmative shall not take away a former Act, and eo potior if the former be particular and the latter be general." Gregory's Case, 6 Rep. 19 b.

"The law will not allow the exposition to revoke or alter by construction of general words, any particular statute where the words may have their proper operation without it." Lyn v. Wyn, 2 Bridg., C.P. 127.

"The general principle is that a general act is not to be construed to repeal a previous particular act unless there is some express reference to the previous legislation on the subject, or unless there is a necessary inconsistency in the two acts standing together." Per Bovill, C.J., in Thorpe v. Adams, L.R., 6 C.P., at p. 135.

"Unless two acts are so plainly repugnant to each other that effect cannot be given to both at the same time, a repeal will not be implied, and special acts are not repealed by general acts unless there is some express reference to the previous legislation or unless there is a necessary inconsistency to the two acts standing together." Per A. L. Smith, J., in Kutner v. Phillips, 1891, 2 Q.B. 267.

"It is a fundamental rule in the construction of statutes that a subsequent statute in general terms is not to repeal a previous particular statute unless there are express words to indicate that such is the intention, or unless such an intention appears by necessary implication." Per Bovill, C.J., in Reg. v. Champneys, L.R., 6 C.P., at p. 394

"In order to show that a particular act is repealed by a general act by implication, it is not enough to show that the particular act may have become useless or futile, that is to say, that the subject-matter of the particular act comes within the terms of the general act; it must be shown, as it seems to me, that there are enactments in the general act, when rightly construed, inconsistent with the maintenance of the particular act." Per Brett, J., in Reg. v. Champneys, supra, at p. 404.

"Now if anything be certain it is this, that where there are general words in a later act capable of reasonable and sensible application without extending them to subjects specially dealt with by earlier legislation, you are not to hold that earlier and special legislation indirectly repealed, altered or derogated from merely by force or such general words, without any indication of a particular intention to do so." Per Lord Selborne, L.C., in Seward v. Vera Cruz, 10 A.C. at p. 68.

See also the enunciation of similar principles by Sir W. Page Wood, V.C., in Fitzgerald v. Champneys, 2 J. and H., at pp. 53-61.

But all of these statements admit that, if the intention of Parliament to that effect sufficiently appears, the later act should be construed as repealing or varying the former act, whether special or general, and several cases have been cited in which the courts have adopted such construction. In most of these the circumstances and the nature of the enactments vary so much from those with which we have now to deal, that they do not appear to afford us any material assistance. In these cases the principles before stated are not contravened; in some, they are expressly acceded to. Usually, the decisions turned upon the view taken by the court of particular language or of the scope and intention of the legislation as understood by the court. I will cite from but two of them. In Daw v. Metropolitan Board of Works, 12 C.B.N.S. 161, Willes, J., said: "The rule of construction of acts of Parliament as laid down by Vice-Chancellor Wood in The London and Brighton Ry. Co. v. Board of Works, 26 L.J., Ch. 164, is no doubt a very wholesome one. A subsequent general enactment will not derogate from a prior special enactment. When, as the learned Judge says, the legislature has had a special case in view, and has specially legislated upon it, the inference necessary is that it does not intend by a subsequent general enactment not referring to the former, to deal with those matters which have already been specially provided for. The rule generalia specialibus non derogant is properly applicable to such a case....In the present case, however, the rule cannot apply. The powers conferred by the two are substantially, if not strictly, the same. So soon as you find that the legislature is dealing with the same subject-matter in both acts, so far as the later statute derogates from and is inconsistent with the earlier one, you are under the necessity of saying that the legislature did intend in the later statute to deal with the very case to which the former statute applied"; and in Great Central Gas Consumers' Co. v. Clarke, 11 C.B.N.S., 814, Keating, J., said: "I agree that, where we find in an Act of Parliament a prohibition against a public company exacting more than a prescribed rate, we should require a very clear enactment in a subsequent act to remove the restriction. But it is equally clear that, if we find in a later act of Parliament provisions which are utterly inconsistent with those of an earlier act, we are bound to give effect to the later provisions." And in the same case, 13 C.B., N.S. 838, Pollock, C.B., said: "Although that section is not in terms repealed, yet it becomes a clause in a private act of Parliament quite inconsistent with a clause in a subsequent public act of Parliament. That is sufficient to get rid of the clause in the private act. Looking at the 19th sec. of the general act, we think it is impossible to read it otherwise than as repealing the 24th section of the private act. We are bound as well by the plain words of the act as by the general scope and object of it, and also by the justice of the case."

By sec. 3 of the Act of 1903, that Act was to be incorporated with and construed as one act with the special act, subject as in the general Act provided; and by sec. 5, in the event of inconsistency between the general Act and any special act passed by the Parliament of Canada relating to the same subject-matter, the provisions of the special act were to be taken to over-ride the provisions of the general Act in so far as should be necessary to give effect to the special act. These provisions are combined in sec. 3 of the present Railway Act. This would settle the matter if the special act had been one passed by the Parliament of Canada, in which case, although earlier than the general acts, the provisions of the special act would prevail. But the portion of the G.T.R. to which the present application refers was constructed under a special act of the late Province of Canada. I have some doubt whether sec. 6 of the Act of 1903, and the similar section of the present Railway Act, under which the general Act is to apply to the exclusion of such of the pro-

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visions of a special act of a Provincial Legislature as are inconsistent with the general Act, were intended to cover the case of a special act passed by the Parliament of a Province before the Union. The definition of the terms "Legislature of any Province," and "Provincial Legislature," in sec. 2, sub-sec. (r) of the Act of 1903, and section 2, sub-sec. 20, of the present Act, is probably wide enough to include such parliaments; and the G.T.R. was declared by an Act of the Parliament of Canada to be a work for the general advantage of Canada. That declaration was included in an Act amending the General Railway Act, which, though referring specifically to the G.T.R. and other named railways, may not come within the definition of a "Special Act." The G.T.R. was a railway connecting one Province with another, and thus became ipso facto, upon the formation of the Dominion, subject to the legislative authority of the Parliament of Canada without a declaration that it was a work for the general advantage of Canada. Sec. 6 was probably intended to apply to railways constructed under special acts of Provincial Legislatures passed after Confederation.

Possibly, however, this may not be important, since sec. 6 embodies the most important of the before-mentioned principles, that the prior special act is repealed or affected by the general Act only where there is inconsistency between them; and I take it that, under either view, the burden is upon the party asserting it to point out the inconsistency, and that this should be made clear.

The clause in the special act is two-fold; it limits the fares for different classes of passengers, and it requires the running of third-class carriages. Necessarily, under the latter portion, there was some obligation upon the company to furnish reasonable accommodation; some obligation to give some attention to the comfort and convenience of third-class passengers, even though this accommodation and attention should not be of the same character as required for the other classes. The legislation requiring the furnishing of adequate and suitable accommodation, and the affording of reasonable and proper facilities, could certainly not effect a repeal of the provision for running third-class carriages, nor, in my opinion, can the legislation empowering the Board of Railway Commissioners to make regulations providing for the protection, safety, accommodation and comfort of the public. Whatever the obligations under the present Act or the former acts, these could not satisfactorily be enforced by the ordinary methods in the ordinary tribunals. The Board of Railway Commissioners was created to be the tribunal for the settling of these and other matters affecting railways and railway companies. It does not appear to me that the creation of such a tribunal was in any way inconsistent with the continuance of the obligation imposed by the special act, or could effect its repeal or evidence and intention of Parliament that the obligation should be no longer effective.

Under the Railway Clauses Consolidation Act, and all the succeeding legislation, down to the Act of 1903, railway tolls were subject to the approval of, and to be altered by, the Governor-in-Council. This limitation upon the company's powers was embodied in the special act by reference to the general Act. The jurisdiction of the Governor-in-Council could exist, therefore, consistently with the limitation as to fares imposed by the special act, and it does not appear to me that the substitution of the Board of Railway Commissioners as the body which is to approve, and which has the jurisdiction to alter, railway tolls, makes any change in this respect. Under the former legislation, all the railway tolls required the approval of the Governor-in-Council; under the present, it is only the standard or maximum tariffs which must be approved by the Board; and railway companies are authorized to make special tariffs imposing tolls lower than those in the standard tariffs. The practice has been for the companies to obtain approval of standard passenger tariffs, not distinguishing between classes, and to provide for second-class fares by special tariffs. Third-class fares could be provided for in the same way. I do not think that the provisions requiring special tariffs are necessarily inconsistent with the limitations imposed by the special act, or that they are sufficient to indicate the intention of Parliament that the company, in framing special tariffs, was to be free from such limitations.

I am not informed whether the third-class carriages were at any time used upon the company's railway. To my mind it is clear that the obligation to use them, and to carry at fares limited as in the special act, continued up to the coming into force of the Act of 1903. I am unable to find in the subsequent legislation any sufficient indication of the intention of Parliament to abolish the system originally imposed upon the company, as having become obsolete or unnecessary. The imposition of this system was one of the terms and conditions upon which the company was granted its franchise, and it should not readily be presumed that Parliament intended to relieve the company from such terms and conditions. The application is limited to the portion of the G.T.R. between Toronto and Montreal, and it is unnecessary to consider whether the obligation ever extended to any other portion of the company's lines.

In my opinion there should be an order requiring the company to run every day throughout the length of its line between Montreal and Toronto at least one train having in it third-class carriages, and forbidding it to charge third-class passenger fares at more than two cents per mile, and directing it to amend its special tariffs accordingly. The operation of this order, however, should be stayed a sufficient time to enable the company to appeal.

ORDER BY THE COMMISSIONERS

The following order, 3346, was issued under date of July 3: In the matter of the application of W. N. Robertson, of Toronto, to the Board under sec. 26 of the Railway Act and sec. 3 of the Act passed by the Parliament of the late Province of Canada in the 16th year of the reign of Her Late Majesty Queen Victoria, chap. 37, intituled An Act to incorporate the Grand Trunk Railway Co. of Canada, for an order directing the G.T.R. Co. to issue third-class tickets at the rate of one penny per mile for each mile travelled, and to run third-class passenger carriages attached to one train per day each way throughout the length of its line; upon hearing counsel for the applicant and for the G.T.R. Co., the Board orders:

That the G.T.R. Co. run every day throughout the length of its line of railway between Toronto and Montreal, at least one passenger train having in it third-class carriages for passenger traffic; and that the fare or charge for each third-class passenger by any train on the said portion of its railway do not exceed two cents for each mile travelled; and that the said company, forthwith after the coming into effect of this order, file with the Board passenger tariffs for the aforesaid portion of its railway embodying the said rate of two cents per mile for third-class passengers.

That the G.T.R. Co. is hereby granted leave to appeal from this order to the Supreme Court of Canada upon the question whether that portion of sec. 3 of the aforesaid Act of the Parliament of the Province of Canada, which required that the fare or charge for each third-class passenger by any train on the railway of the said company should not exceed one penny currency for each mile travelled and that at least one train having in it third-class carriages should run every day throughout the length of the line of the said railway, is now in force.

That, in the event of an appeal from this order being entered for hearing at the next ensuing sitting of the Supreme Court of Canada, this order do not take effect until after the final disposition of the said appeal; but in the event of no such appeal being entered on or before the commencement of the said sitting, this order shall then immediately take effect.

The G.T.R. Co., has entered an appeal to the Supreme Court of Canada against the Commission's judgment.

F. H. McGuigan's Resignation.

Considerable surprise was expressed in Canadian railway circles when it was announced on Aug. 9, that F. H. McGuigan had resigned his position as First Vice-President of the Great Northern Ry. (U.S.A.). Of course there were some who, as usual, looked wise and said, "I told you so," but the resignation was certainly most unexpected, notwithstanding the fact that the tenure of important positions on the G.N.R. has always been very uncertain, and that probably no other company has had so many and so frequent changes. It was generally understood that Mr. McGuigan had left the G.T.R. under a contract with the G.N.R. for a term of years, and it was thought that before accepting the position his jurisdiction and powers would have been clearly understood and defined. The daily press has given prominence to various reports about disagreements between President L. W. Hill and Mr. McGuigan, but no definite statement has been made on either side. The fact appears to be that Mr. McGuigan's plans in regard to operation, etc., were opposed by L. W. Hill.

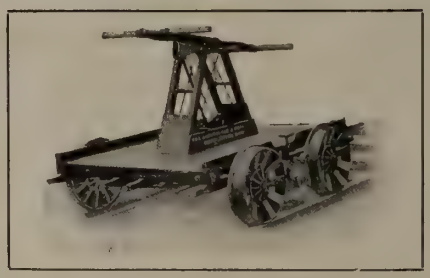
Mr. McGuigan left St. Paul, Minn., on Aug. 10, and went over the G.T.R. on his way to Portland, Me., where he is staying with his family in a cottage taken for the season. His son-in-law, J. H. Vernon, who was on his staff in St. Paul, left there with him.

Press reports dated Aug. 24, stated that Mr. McGuigan was lying seriously ill and in a critical condition at Portland, Me., and that Dr. J. A. Hutchison, Chief Medical Officer of the G.T.R., had been sent for. Later reports, however, are to the effect that the condition of the patient was not so alarming as at first indicated, and that Mr. McGuigan was considerably better.

Mr. McGuigan's resignation from the G.T.R. was followed by those of G.R. McLeod, Division Engineer, Toronto; H. H. Brewer, Superintendent of Toronto terminals; C. L. Mayne, Superintendent of Montreal terminals; S. H. Ennis, Assistant Superintendent at Ottawa; D. McCool, General Roadmaster Montreal, and P. H. McFadden, General Roadmaster Allandale, all of whom left for the U.S. to join the G.N.R. service. Mr. McLeod was appointed Private Secretary to Mr. McGuigan, and Mr. Mayne was appointed Division Superintendent at Spokane, Wash. The appointments, if any given the others, were not announced. It is said that Mr. Brewer was the General Superintendent of Terminals, and that he has been inspecting all the terminals on the system.

The Quebec Transportation Club is said to be arranging for a trip to New York, Philadelphia and Atlantic City in October.

It is reported that Hanson Bros., Montreal, have obtained an option on the stock of the Quebec Ry., Light and Power Co., on behalf of Mackenzie, Mann & Co., Ltd.



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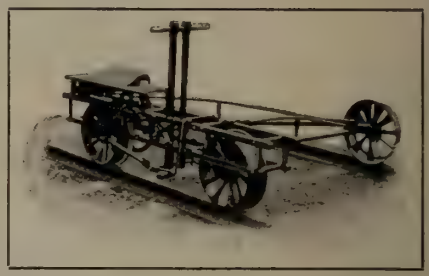

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C.P.R. Tunnel Near Palliser, B.C.

In a previous issue we stated that the C.P.R. had built a new tunnel in the Kicking Horse Pass, near Palliser, B.C., eliminating the very heavy curve at that point. At the same time this part of the road was constructed, during 1884 and 1885, a tunnel was excavated on a location shown in fig. 1, and lined with timber, but it caved in while work was still in progress. The character of the material was such that a detour line had to be built around the tunnel, following the bank of the Kicking Horse River, in order to keep the road open. Efforts to reopen the closed tunnel were unsuccessful, and, notwithstanding that it has not been used during all these years, it has commonly been known as "Mud Tunnel." Until Sept., 1906, the road was operated around the 22-deg. 15-min. curve, which has become a proverbial instance of sharp curvature in main-line operation of a standard-gauge road. The location of the alignment of the new tunnel is shown on the map. This tunnel is 693.5 ft. long, partly on an 8-deg. curve. It saves 1,192 ft. in distance, eliminates two curves and economizes in other particulars, as shown by the comparative statement in fig. 1.

The construction of this tunnel was through very difficult material, mostly wet blue clay, with small quantities of sand, gravel, hard pan and other materials, as indicated in fig. 2. The method of excavation, illustrated by successive stages, is shown in fig. 3. First two parallel headings were driven on the grade of the wall plates, and next a crown drift for the placing of the crown bars. After this the material between the side and crown drifts was removed, and the remaining crown bars placed in position. After placing the arch timbers the core between the side drifts was excavated, and then post trenches were excavated to grade and the posts placed in position under the wall plates. The removal of the bench completed the work of excavation. Logs 30 to 40 ft. long were used as crown bars and 8 by 10 in. timbers for wall plates. Ordinary cordwood was used for lagging. Other details regarding the timbering are made clear in fig. 3. This work had to be done under heavy pressure of the superincumbent material, making it necessary to follow the timbering closely with the lining, which consists of concrete reinforced with bars, as illustrated in fig. 4. Generally it is 3 ft. thick at the springing line and 2 ft. thick at the crown. At the base of the side walls the thickness is 4 ft. 4 ins., and the bottom of the tunnel is an invert.

The proportion of the concrete mixture was varied to suit conditions at different points. At the east portal the wing walls are built of 1:3:6 plain concrete, faced with 4 ins. of cement mortar. For a short distance from this end the tunnel arch and walls are not reinforced, the lining being 3 ft. thick and side walls 2 ft. thick. In other parts of the tunnel the arch was made of 1:2:4 and 1:2½:5 concrete, as conditions varied. The work of construction was begun in Oct., 1905, and the tunnel was completed July 31, 1906.—Railway and Engineering Review.

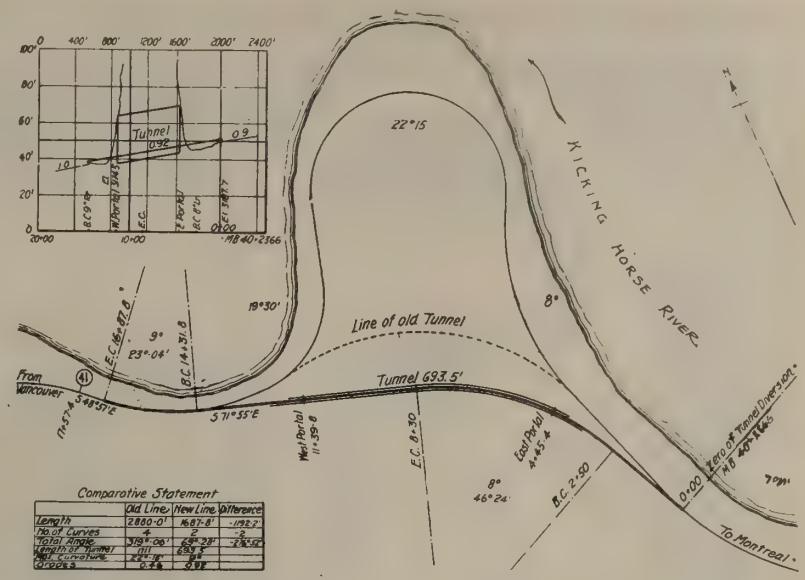


FIG. 1. CURVE AND TUNNEL ON C.P.R. IN KICKING HORSE PASS, B.C.

Request for Railway Statistics.

The Secretary of the Board of Railway Commissioners has issued the following circular to railway companies: "I am directed by the Board to inform you that under the powers conferred by the Railway Act, sec. 375, and all other powers possessed by the Board in that behalf, the Board has made an order requiring the various railway companies subject to the legislative authority of Parliament to furnish to the Board on or before Oct. 1 next written statements showing the various particulars set out in paragraph (a) to (l) in section 375, viz.: the assets and liabilities of the company; the amount of its stock issued and outstanding, and the date at which any such stock was so issued; the amount and nature of the consideration received by the company for such issue, and, in case the whole of such consideration was not paid to the company in cash, the nature of the services rendered to or properly received by the company for which any stock was issued; the gross earnings or receipts or expenditure by the company during any periods specified by the Board, and the purposes for which such expenditure was made; the amount and nature of any bonus, gift, or subsidy received by the company from any source whatsoever, and the source from which, and the time when, and the circumstances under which, the same was so received or given; the bonds issued at any time by the company, or what portion of the same are outstanding and what portion, if any, have been redeemed; the amount and nature of the consideration received by the company for the issue of such bonds; the character and extent of any liabilities outstanding, chargeable upon the property or undertaking of the company, or any part thereof, and the consideration received by the company for any such liabilities, and the circumstances under which the same were created; the cost of construction of the company's railway or of any part thereof; the amount and nature of the consideration paid or given by the company for any property required by it; the particulars of any lease, contract or arrangement entered into between the company and any other company or person; and, generally, the extent, nature, value and particulars of the property, earnings and business of the company. And further, to furnish to the Board the following details and particulars, namely:

MILEAGE UNDER OPERATION—Length of main line, naming termini; total length of branch lines; total mileage.

TRAFFIC—Passenger—Paying passengers carried; paying passengers carried one mile; paying passengers carried one mile per mile of road; average journey per passenger; revenue from passenger tickets; revenue from excess baggage; revenue from baggage storage; revenue from mails; revenue from express; revenue from milk traffic; total as above; average amount received from each paying passenger; average amount received per passenger per mile; average number of passengers per train mile; average number of passengers per car mile; revenue from passengers per passenger car mile; total passenger train earnings (all sources) per train mile; total passenger train earnings (all sources) per mile of road; proportion of return tickets to ordinary one way tickets.

TRAFFIC FREIGHT—Number of tons revenue freight carried; number revenue tons carried one mile; number revenue tons carried one mile per mile of road; average distance haul of one ton; revenue from freight haulage; revenue from switching-balance; revenue from elevation; revenue from car service (demurrage); revenue from warehouse storage; revenue from vessels under Railway Act, sec. 7; revenue from other items; total as above; average amount received per ton of revenue freight; average

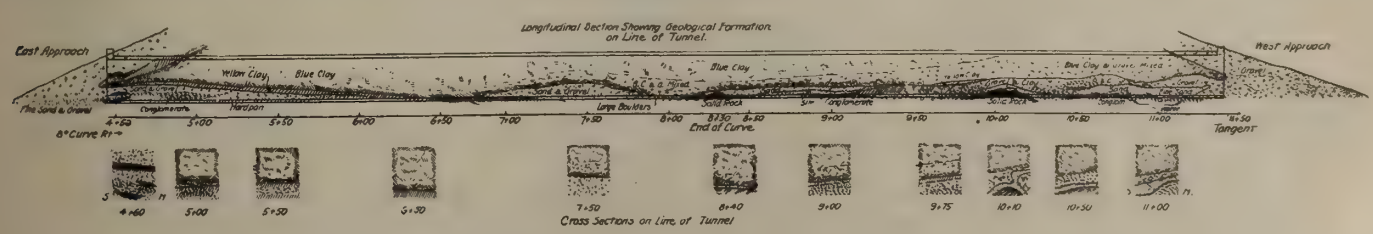
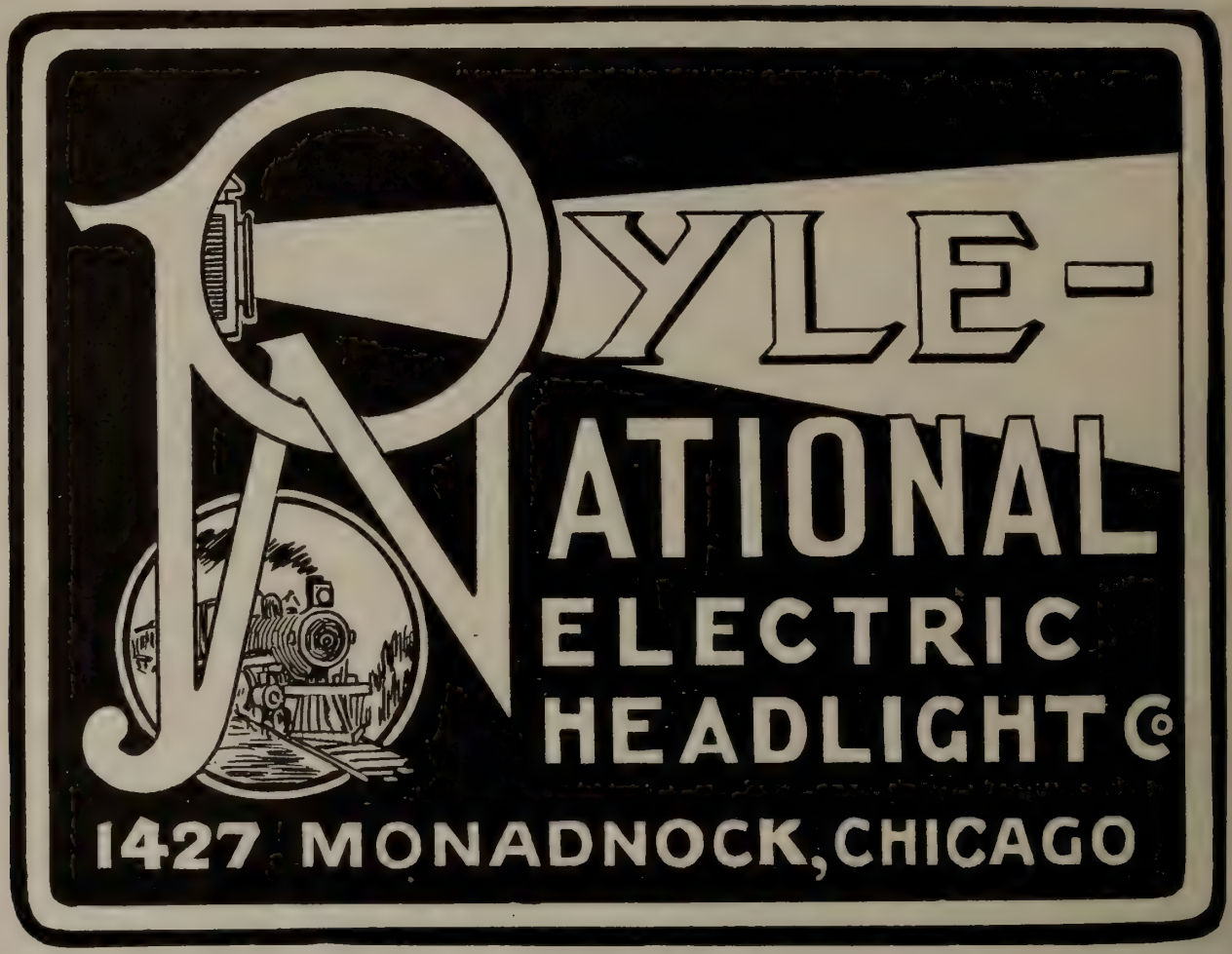


FIG 2. TUNNEL ON THE C.P.R IN KICKING HORSE PASS, B.C. LONGITUDINAL SECTION AND TYPICAL CROSS SECTION SHOWING GEOLOGICAL FORMATION



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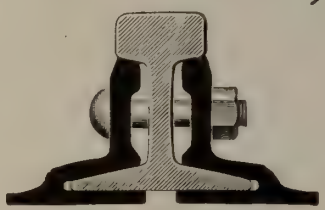
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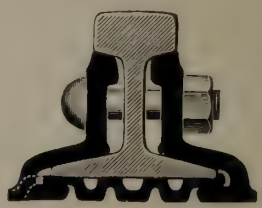
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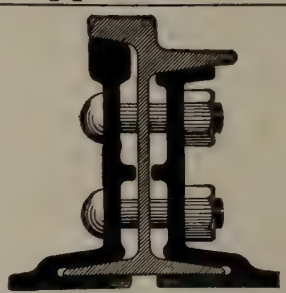
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receipts per revenue ton per mile; average number of tons revenue freight per train mile; average number of tons revenue freight per loaded car mile; freight train earnings per loaded car mile; freight train earnings per train mile; freight train earnings per mile of road.

TOTAL TRAFFIC—Gross earnings from operation; gross earnings from operation per mile of road; gross earnings from operation per train mile; gross operating expenses; gross operating expenses per mile of road; gross operating expenses per train mile; income from operation; income from operation per mile of road.

TRAIN MILEAGE—Mileage of revenue passenger trains; mileage of revenue mixed trains; mileage of revenue freight trains; mileage of non-revenue trains."

Railway Mileage and Three Cent Fares.

The Chief Traffic Officer of the Board of Railway Commissioners has prepared the following memorandum, the figures being "about" in each case:

Total mileage of steam railways in Canada, 21,819.

Total mileage of steam railways subject as to tolls to the Railway Act, 18,400.

Total mileage of steam railways not subject as to tolls to the Railway Act, 3,419.

Mileage of steam railways east of Rockies subject as to tolls to the Railway Act, 16,714.

Mileage of steam railways east of Rockies not subject as to tolls to the Railway Act, 3,248.

Mileage of steam railways west of the Calgary & Edmonton Ry., 1,857.

Mileage of steam railways east of Rockies subject as to tolls to the Railway Act, whose maximum passenger rate is over 3 cents, 2,065.

Mileage of steam railways east of Rockies subject as to tolls to the Railway Act, whose maximum passenger rate is not over 3 cents, 14,649.

About 87% of the steam railway mileage east of the Rockies, subject as to tolls to the Railway Act, has a maximum passenger rate of 3 cents.

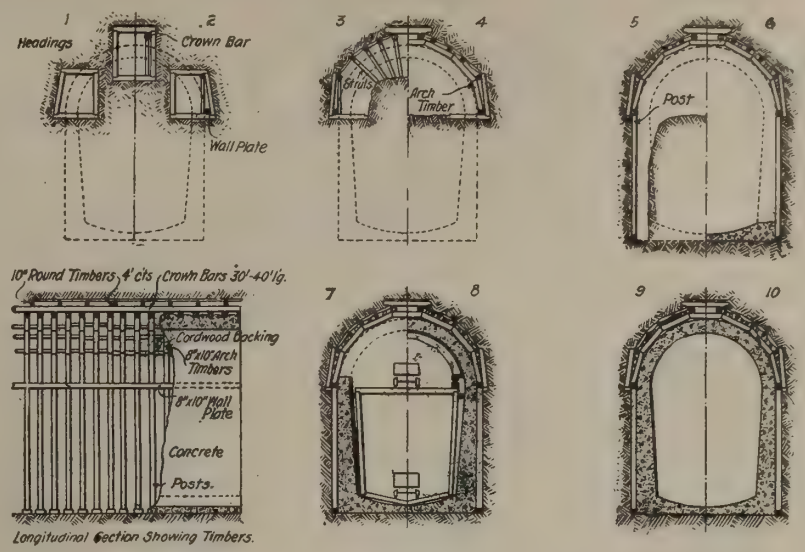

FIG. 3. TUNNEL ON C.P.R. IN KICKING HORSE PASS B.C. CROSS SECTIONS SHOWING SUCCESSIVE STAGES IN CONSTRUCTION.

Through Routes and Through Rates.

The U.S. Interstate Commerce Commission held a hearing in Chicago in May upon the matter of through rates which should govern shipments over more than one railway where no joint rate had been made. The Commission's decision, which has recently been given, is summarized as follows:

Where a through route has been formed the rate charged is a through rate, and the shipment will move upon the rate existing at the time it is billed by the initial carrier.

A through route is a continuous line of railway formed by an arrangement, expressed or implied, between connecting carriers. It must have a rate for every service it offers; and as the route is a new unit—one line formed of two or more connecting lines—so its rate for every service is a unit, even though it be divided between the several carriers arranging themselves into the through route.

Existence of a through route is to be determined by the incidents and circumstances of the shipment, such as the billing, the transfer from one carrier to another, the collection and division of transportation charges, or the use of a proportional rate to or from junction points or basing points. These incidents named are not to be regarded as exclusive of others which may tend to establish a carrier's course of business with respect to through shipments.

Where through billing is given by the originating carrier and is recognized by all connecting carriers to destination, there is in existence a through route over which a through rate applies, which through rate is ascertainable from the tariffs of the participating carriers at the date of shipment; and when such rate is made up of the sum of the locals, the locals apply as of the date of shipment. Any increase in the through rate so made after the date of the shipment or any decrease therein, is not applicable to such through shipments.

Tariffs cannot be given a retroactive effect; they cannot be made to apply to conditions other than those existing upon the date when such tariffs became effective. A combination through rate is as binding, definite, and absolute as a joint through rate; and all of the conditions, regulations, and privileges obtaining as to any factor in such combination rate for through shipment at the time of the initial shipment upon such combination through rate must be adhered to, and cannot be varied as to that shipment during the period of such shipment to its final destination. A local or proportional rate "in" can not be absorbed, diminished, or affected by any "out" rate not in effect at the time when the traffic moved upon such local or proportional rate.

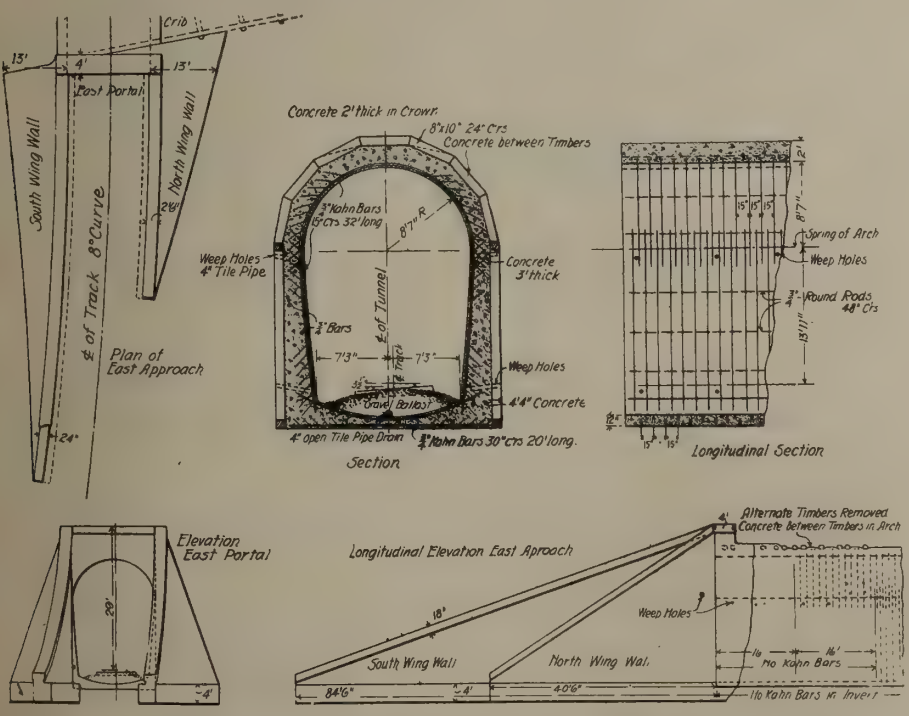

FIG. 4. TUNNEL ON C.P.R. IN KICKING HORSE PASS B.C. METHOD OF REINFORCING CONCRETE LINING.

The appeal of the C.P.R. against the conviction for an alleged violation of the Lord's Day Act, at Claresholm, Alta., in March last, was heard recently, and the conviction quashed.

The annual meetings of the Old Time Telegraphers and Historical Association, and the Society of the United States Military Telegraph Corps, will be held at Niagara Falls, Sept. 16, 17, and 18.

The dispute between the G.T.R. and its locomotive engineers was settled, Aug. 13, by an agreement arrived at by the Board of Conciliation, and accepted by both parties, covering a period of three years from Aug. 1.

E. C. Lalonde, Chief Inspector of Accidents to the Railway Commission, is conducting an enquiry into the cause of the explosion of dynamite which occurred on the Michigan Central Rd. at Essex Centre, Ont., recently.

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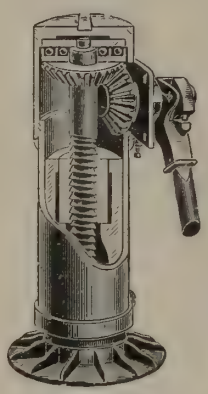
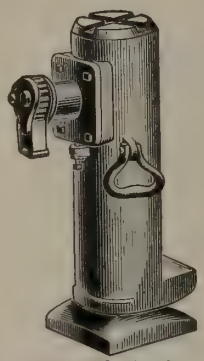


Sectional View



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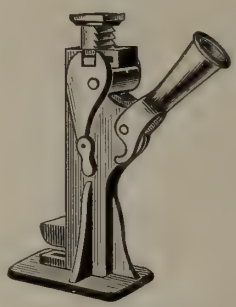

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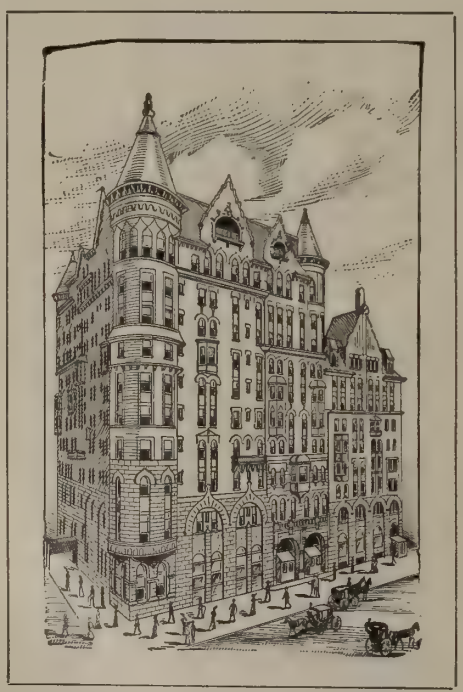

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Vancouver Eastbound vs. Winnipeg Westbound Freight Rates.

The Chief Railway Commissioner, A. C. Killam, has delivered the following judgment: The boards of trade of British Columbia Pacific Coast cities complained to the Board that the railway rates, levied on all classes of goods from Vancouver to points located in British Columbia and the Northwest Territories as far east as Calgary, on the main line, and MacLeod, on the Crow's Nest Line, were discriminatory as against them as compared with the rates on westbound traffic from Winnipeg to the same territory. The rates attacked were those in force on the C.P.R. The complaint was not based on the ground that the rates were, in themselves, so excessive as to be unreasonable or unjust, but merely on the ground that undue preference was given to traffic from Winnipeg westward, as compared with that from the coast cities eastward.

It appears that most of the traffic carried westward from Winnipeg is carried under what are know as "traders' tariffs" marked as "To be used on re-shipment by Winnipeg wholesale houses only to traders doing business at or tributary to stations specified" in the tariffs. Some contest has arisen as to the extent to which those tariffs are used; and the railway company contends that comparison should not be made with them, as the rates are only the balances of through rates from points east of Winnipeg to the western points in question, after deducting the regular tariff rates to Winnipeg. It appears to me, however, that these questions are quite immaterial. If, by so basing the rates, an unjust preference is given to Winnipeg as against the Pacific points, it is equally as objectionable as if the rates were computed on any other basis, and the comparison should be made with traffic carried for similar parties and under similar conditions, and on other traffic the tariffs applicable thereto are those between which comparison should be made.

The complainants rely mainly on a comparison of the respective distances from Winnipeg and Vancouver, claiming that the levying of higher rates for shorter distances raises a presumption of unjust discrimination. They rely also upon a comparison of the practice upon lines in the United States, claiming that the westbound rates from St. Paul are equalized with the eastbound rates from Seattle and Portland at points much farther east than are the rates from Winnipeg with those from Vancouver on the C.P.R. It appears to me that no inference can be drawn from a mere comparison of distances upon different portions of railways, and that it does not constitute discrimination—much less unjust discrimination—for a railway company to charge higher rates for shorter distances over a line having small business or expensive in construction, maintenance, or operation, than over a line having large business or comparatively inexpensive in construction, maintenance and operation. In my opinion a party raising such a complaint upon a mere comparison of distances should show the nature of the particular lines referred to and that there is a material disproportion of rates as against the the shorter line after due allowance is made for the circumstances just mentioned. At the hearing, the complainants offered no evidence upon these points; but the railway company gave some evidence showing that the cost of maintenance and operation were much greater, and the traffic lighter, upon the western portion of the line than upon the portion from Winnipeg westward. While this showed that some difference in rates, as compared with distances, was reasonable, the information given was not sufficient to form an accurate judgment as to whether, after making due allowance for difference of traffic and expense, the western rates were unduly high as compared with the others.

As the matter was one of considerable public importance, the Board did not feel warranted in dismissing the complaint on the mere ground that no sufficient proof of discrimination had been given, but directed its Chief Traffic Officer to make further inquiries, and afford it all the information possible for the purpose of enabling it to arrive at a correct conclusion. This inquiry has been made, with the result that the figures given by the railway officials have been found to have been, in the main, correct, and that some further information has been procured. Members of the Board are aware, from personal investigation of the route, that grades are much heavier, and the line much more difficult of operation, in British Columbia than in the prairie provinces, and this view has been clearly established by the evidence. The original report of the Chief Traffic Officer showed that, by computations based upon the evidence as to the cost of operation and maintenance upon different sections of the main line of the railway, the rates from Vancouver to Calgary were really lower, as compared with those from Winnipeg to Calgary, than if they were based upon the proportionate expense. No accurate data were furnished by the evidence, or by the subsequent reports of the Chief Traffic Officer, for a comparison of the expense of operation and maintenance on what is known as the Crow's Nest route with that for the prairie lines, though the Chief Traffic Officer reported that the Crow's Nest line was much the more expensive to operate. He, however, made some further calculations based on a comparison of grades and the assignment, as a result thereof, to portions of the lines in British Columbia of a constructive mileage at the rate of one and a half miles from Yale to Revelstoke, and two miles from Revelstoke to Canmore, for each actual mile of railway. This estimate was taken from a statement in a letter of W. R. MacInnes, Freight Traffic Manager of the C.P.R. Co., that a certain tariff of the company was based upon such constructive mileages. This calculation showed that, using the constructive mileage thus estimated, the rates from Winnipeg westward were less per mile than those from Vancouver eastward. It appears to me that the results of such estimates afford no reliable basis for concluding that the Vancouver eastbound rates are discriminatory as compared with the Winnipeg westbound rates. The estimates are very loose, and are not based upon any definite calculations. Those based upon actual figures, as to comparative expense of operation and maintenance, are much more reliable, even though, in some respects, details are not fully given. Although the company may in the past, for some purposes, have made use of such estimates, this should not be taken as establishing that the estimates were sufficiently accurate for the purposes of the complaint now in question. It is clear that an absolutely accurate comparison cannot be made, and the evidence does not appear to me sufficiently strong to warrant the conclusion that the eastbound rates are unduly high as compared with the westbound ones. The report of the Chief Traffic Officer further shows that the rates from Vancouver eastward are lower than those on the U.S. lines, and this, although the portions of the U.S. served by these lines are much more productive and thickly settled, and afford greater local traffic, than British Columbia; and, also, that the points at which the eastbound and westbound rates meet in the U.S. are considerably nearer Seattle than is claimed by the complainants; and that, comparing the proportionate distances from Winnipeg and Vancouver respectively with those from St. Paul and Seattle respectively, the average points of meeting of the rates on the C.P.R. are as fairly situated as the points on the lines in the U.S.

So far as the traffic over the Crow's Nest line is concerned, it would be much more satisfactory if more definite information as to the cost of operation had been procured; but, taking into consideration the respective rates over that line and over the main line via Calgary to MacLeod, and the results of the other inquiries, it does not seem to me sufficiently probable that further inquiry would establish the unfairness of the rates to warrant us in making such inquiry. It must also be remembered that the traffic on the prairie sections of the C.P.R. is very much greater than that upon the lines in British Columbia; that the earnings per mile of the company for the prairie lines are very much greater than in British Columbia, and that the company may reasonably be expected to carry the traffic on the prairie lines at lower rates than upon the other lines. At any rate, if it sees fit to do so to a reasonable extent, it cannot well be claimed that this course involves unjust discrimination as against the traffic in and through British Columbia.

There are two minor points which require consideration. One arises under special commodity tariffs for westbound traffic from Winnipeg upon the classes of articles named in the statute 60-61 V., c. 5, s. 1 (d), intituled An Act to authorize a subsidy for a railway through the Crow's Nest Pass. That Act authorized the granting to the C.P.R. Co. of a subsidy towards the construction of a railway from Lethbridge, through the Crow's Nest Pass, to Nelson, upon certain conditions, one of which was that an agreement should be made between the Government and the company by which, among other things, a reduction was to be made in the general rates and tolls of the company upon the classes of merchandise therein mentioned westbound from and including Fort William and all points east of Fort William on the company's railway to all points west of Fort William on the company's main line, or on any line of railway throughout Canada owned or leased by or operated on account of the company. As a result of this Act and the agreement made under it, the company made tariffs of reduced rates upon the classes of merchandise referred to, not only from Fort William and points east thereof westward, but also from Winnipeg westward, without similarly reducing rates on the same classes of merchandise from Pacific points eastward. These reductions cannot be considered as having been forced upon the company, but were the result of an agreement which it chose to enter into for the purpose of obtaining a subsidy in aid of the construction of a line of railway. The agreement and the statute did not even deal with rates from Winnipeg at all. When the statute was passed, and when the agreement was made, the law prohibited unjust discrimination between localities; and while Parliament did not stipulate for similar reductions over western portions of the company's railway, it should not, in my opinion, be considered as having authorized what would, if done otherwise, have produced unjust, discrimination. I think that we are justified in inferring that, in respect of the classes of merchandise to which these tariffs relate, the reductions did result in such discrimination, and that the rates from

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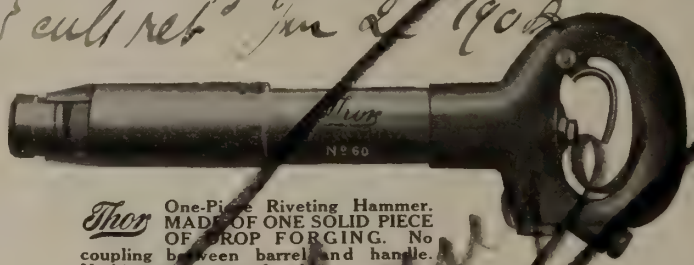

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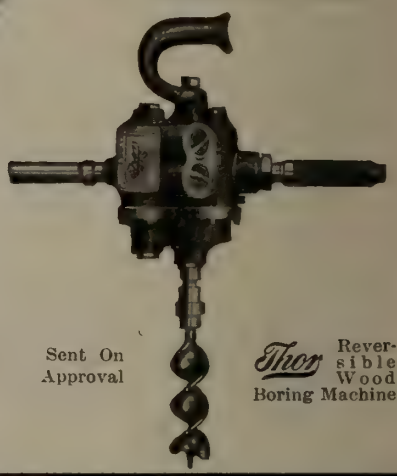

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Vancouver eastward, upon similar traffic carried under similar circumstances, should be proportionately reduced.

The remaining point arises out of the facts that, in order to meet water competition on the Pacific coast, the railway company carries goods from eastern points to the Pacific coast at lower rates than to interior western points, and that the same practice prevails with reference to the rates from Winnipeg westward; and that, at many interior points, the rates from Winnipeg to points on the coast, and from the latter points to the interior ones. The low rates to the coast are made necessary in order to enable the railway companies to obtain traffic in competition with ocean carriers. Such a practice is distinctly authorized by the Railway Act, and, unless the higher rates from eastern points to interior western points are, in themselves, unjust or unreasonable, this practice does not involve unjust discrimination. Necessarily the situation must have a modifying effect upon the rates to the interior points, which must vary with the distances from the Pacific ports. Prima facie the railway company should be entitled to charge reasonable rates from the Pacific ports eastward, and it should not be obliged to charge, and would not even be warranted in charging, excessive rates to the interior points for the purpose of equalizing the position of the Pacific coast points. It does not appear to me that the mere fact that the westbound rates from Winnipeg or any other point to such interior western point are less than the rates which would be made up by a combination of the rates from such eastern points to Pacific points, and from the latter to the interior point, in itself, constitutes unjust discrimination or undue preference. The railway company is allowed to meet competition at the coast points, and I think it should equally be allowed to meet the effect of that competition upon interior points to a reasonable extent.

I am of opinion that the complaint should be dismissed, except in so far as relates to the classes of traffic for which reduced rates were given under the Act relating to the Crow's Nest line.

The Deputy Chief Commissioner, Hon. M. E. Bernier, concurred in the Chief Commissioner's judgment. Commissioner Mills dissented as follows: I regret my inability to concur in the Chief Commissioner's judgment in this case. I do not attach so much importance as he seems to attach to certain portions of the evidence—evidence into which the element of interest enters largely, and there is clear ground for difference of opinion as to its value; and I differ wholly from the opinion expressed as to the bearing of what is called the "constructive mileage" evidence; it has, I would venture to say, a manifestly direct bearing, and is in my opinion the best possible evidence as to the relative cost of the operation and maintenance of the two sections of the railway, the mountain section and the prairie section—because it is an expression of the deliberate opinion of the railway company, with the facts in its possession, at a time when there was no dispute and no issue to be settled; according to which opinion, each mile of the road between Yale and Revelstoke cost as much to operate and maintain as one and one-half miles of the prairie section, and each mile between Revelstoke and Canmore as much as two miles of the prairie section. The rates were adjusted on this basis, and no complaint was made by any section of the country. At a later date, the rates on the prairie section were reduced, without any corresponding reduction on the British Columbia (including the mountain) section; the balance was thus disturbed, and has remained so, although no evidence was given at the hearing or since to prove that the traffic on the British Columbia section had then become or now is relatively any less than it was when the "constructive mileage" basis was established; and for this reason, as I understand it, the Chief Traffic Officer of the Board used the "constructive mileage" of the company in one of his calculations. Further, the Chief Traffic Officer, whose technical knowledge and experience specially fit him for dealing with such questions, investigated the points at issue in all their bearings, at great length, and with the utmost care; he read and weighed the evidence pro and con; he considered the objections urged by the representatives of the railway company against the statements and recommendations made in his report of Dec. 7, 1906; and he came to the conclusion that there has been and is discrimination against the Pacific coast cities as compared with Winnipeg. Therefore, without stating my reasons at greater length or further enumerating the portions of the Chief Commissioner's argument and conclusions from which I have to dissent, I would say that I approve of the recommendations of the Chief Traffic Officer, as follows:

a. That the rates between Vancouver and Calgary should be reduced so as to preserve the same relative proportion between these and those between Winnipeg and Calgary as existed before the latter were reduced some years ago; in other words, that the prairie rates should apply between main line points in British Columbia, counting one mile between Yale and Revelstoke as equivalent to one and a half prairie miles, and one mile between Revelstoke and Canmore as equivalent to two prairie miles—equalizing the Vancouver eastbound and the Winnipeg westbound rates at a point 67 miles west of Calgary.

b. That the rates between Revelstoke and MacLeod via Nelson should be similarly reduced, counting each mile between Yale and Crow's Nest as one and a half prairie miles, instead of two miles, as at present.

c. That from Vancouver to Calgary and MacLeod and intermediate points, commodity rates should be given on the same articles as have commodity rates from Winnipeg under the so-called "Crow's Nest Pass Agreement," these rates to be calculated in the same manner as the class rates, as in sections a and b—equalizing the Crow's Nest reduced rates from Vancouver eastbound and the rates from Winnipeg westbound at Wardner, 146 miles west of MacLeod.

The Steel Rail Question.

A suggestion for profitable use by the mills of the larger crop-ends of ingots from which rails are rolled in accordance with the proposed modified specifications comes from R. W. Hunt, a good authority on rails. The reason for cutting off only 10 to 12 per cent. of the top of the ingot, instead of twice as much, is because this added discard means waste and reduced output. Perhaps these crop-ends can be converted into a profitable by-product. Captain Hunt's idea is to make angle-bars of them. Most of the angle-bars used at present are the same composition as ordinary soft wire rods, being made by the mills from the same ingots and rolled at the same time that the billets for the rods are produced. They are punched and sheared cold. Angle-bars made from rail ingot crop-ends would have nearly the same constituents as the rail steel; and at first thought high-carbon steel for angle-bars seems objectionable. But their use would not be a new departure, for the C.P.R.'s angle-bar specifications are substantially those of its rail steel, with a carbon content of from 0.50 to 0.65. The Canadian Northern Ry. is also using high-carbon bars. The late A. Torrey was perhaps the first to recognize the economy of high-carbon steel in angle-bars and used them on the Michigan Central Rd., of which he was Chief Engineer. He noted the rapid wear of soft bars, due to the motion of the rails, and the fact that they would take a permanent set and thus hold down the rail joint. He found that sometimes when the soft angle-bars were removed from a low joint the rails would spring back to a level surface. The high-carbon bars, especially those made from crop-ends, will break more readily than the others, of course, but a broken angle-bar is not a serious matter and with ordinary watchfulness no harm should result.

Still another suggestion for a profitable use of nearly all of the proposed 25% discard from the ingot comes from the chief engineer of one of the most important railroads of the U.S. It is that the ingot be not cropped, but all of it made into the bloom and rolled to a finished rail section. Then cut from the rail 8 ft. lengths until strictly homogeneous steel, without piping, is reached. These 8 ft. lengths can be rolled into almost any imaginable section and shape for steel ties by the York cross-rolling process. It is believed that the amount of work put into the metal tie by this cross-rolling process will be quite enough to make a sufficiently strong tie, and especially for the reason that the larger rail sections rolled into steel ties have great excess strength, so that there would be a large co-efficient of safety even if defective metal were used. There is one difficulty about this: No shape of steel tie has yet been devised to entirely fill the office of the wooden tie. It is necessary to secure a resiliency which will somewhat correspond to that afforded by the material of the wooden tie, the slight lateral movement of the spike in the wood and the slight canting of the rail due to the fact that it is not held with absolute rigidity to the tie. The steel tie must be made of such a form as to prevent its lateral movement in the ballast. It must also be capable of insulation, for apparently the electric track circuit for signalling purposes has come to stay. The steel tie also needs protection from rust. We have, therefore, clean-cut problems for the designing engineer. If he can devise a form of steel tie that will satisfy the requirements, the cross-rolling process, either applied to old rail or to piped rail, is apparently cheap and effective.—Railroad Gazette.

Canadian Transportation Loans.—The Imperial Chancellor of the Exchequer has issued a statement with regard to colonial loans which have been guaranteed by the Imperial Government. Among these are the following, raised definitely for railway and canal construction: 1867, £3,000,000 at 4%, for the construction of a railway connecting Quebec and Halifax; net amount outstanding Mar. 31, 1907, £328,940 11s. 5d. 1873, £3,600,000 at 4%, for the construction of the Pacific Ry. and improvement of canals; net amount outstanding Mar. 31, 1907, £1,905,558 9s. 2d. The net amount outstanding is in each case taken to be the gross sum outstanding, less the nominal amount of the securities held on account of sinking fund.

The New Brunswick Government has issued a year book for the Province in which a review is given of the winter trade of the port of St. John, and a statement regarding the route of the projected St. John Valley Ry. The statistics show that there are 1,518 miles of railway in the province.

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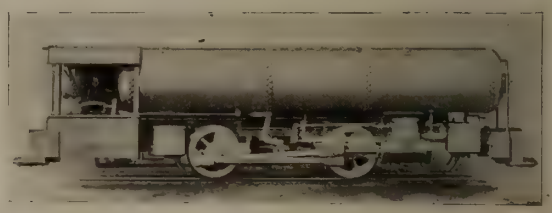

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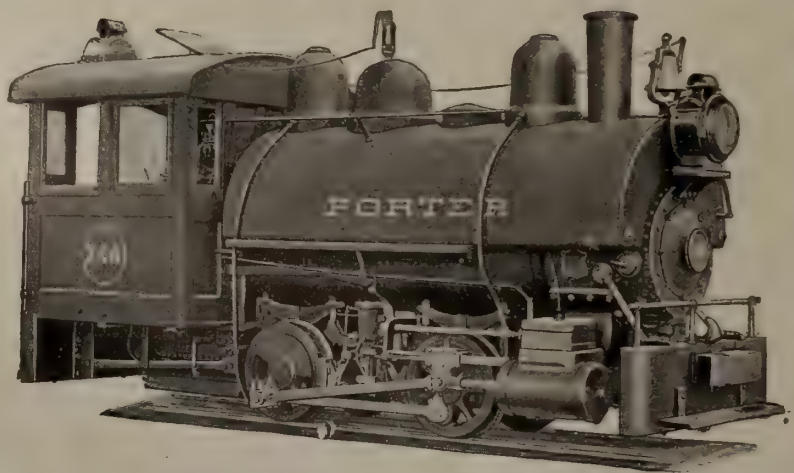

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LOGGING, MINE AND INDUSTRIAL LOCOMOTIVES.

Orders by the Railway Commissioners.

3275. July 16.—Extending time provided in order 2867 to Oct. 17, 1907, for the installation of interlocking plant by G.T.P. Ry. where its tracks cross the C.N.R. (Carberry Branch), sec. 1, tp. 12, r. 15, w. 1st m., Manitoba.

3276. July 16.—Authorizing Bell Telephone Co. to place underground wires across G.T.R. tracks at King St. South, Waterloo, Ont.

3277. July 11.—Authorizing J. L. Benn to erect telephone wires across C.P.R. tracks at Mountain Grove, Ont.

3278. July 11. — Authorizing Western Counties Electric Co. to place wires across G.T.R. tracks in Brantford, Ont.

3279. July 12.—Authorizing Clarenceville & St. Thomas Telephone Co. to place wires across the Q.M. & S.R. tracks at Noyan crossing, Missisquoi County, Que.

3280. July 17.—Authorizing C.P.R. Co. to construct and operate a spur line across Emerson Ave., Toronto, to the Dominion Radiator Co.'s premises.

3281. July 16.—Authorizing the Ontario Power Co. to place transmission wires over the M.C.R. tracks near Welland station, Ont.

3282. July 12.—Authorizing P. E. Chauvin and E. Desmarais to place wires across G.T.R. tracks at Stony Point, Ont.

3283. June 28.—Approving location of Kingston, Smith's Falls and Ottawa Ry. from its junction with the G.T.R. at Rideau, Ont., to boundary line between lots 40 and 41, con. 4, tp. Pittsburg, Ont.

3284. July 12.—Approving proposed location of the C.N. Ont. Ry. through townships of Murray, Brighton and Cramahe, and of its revised location through tp. of Haldimand, Northumberland County, mileage 146 to 164.5 west from Ottawa.

3285. July 15.—Approving by-law authorizing W. N. Warburton, General Manager Windsor, Essex and Lake Shore Rapid Ry., to prepare and issue tariffs of tolls to be charged between Windsor and Leamington.

3286, 3287, 3288. July 16.—Approving by-laws authorizing W. P. Kenny, Assistant Traffic Manager Bedlington and Nelson Ry., the Nelson and Fort Sheppard Ry., and the Red Mountain Ry., to prepare and issue tariffs of tolls to be charged on their line for the carriage of traffic.

3289. July 12.—Authorizing Bell Telephone Co. to erect wires across M.C.R. tracks just east of Ridgetown station, Ont.

3290 to 3296. July 12.—Authorizing Bell Telephone Co. to erect wires across various railway tracks.

3297. July 11.—Authorizing G.T. Pacific Ry. to correct its location plans from east line of sec. 31, tp. 35, r. 14, west 3rd m., to west line of sec. 16, tp. 36, r. 15, west 3rd m., Saskatchewan, mileage 59.842 to 64.706.

3298. July 11.—Authorizing G.T. Pacific Ry. to correct its location plans from the n.w. ¼ sec. 27, tp. 37, r. 18, west 3rd m., to n.e. ¼ sec. 15, tp. 39, r. 20, west 3rd m., Saskatchewan, mileage 84.146 to 100.658.

3299. July 11.—Authorizing Canadian Northern Extension Ry. to place its wires across C.P.R. tracks at crossing of the C.P.R. and C.N.R. at Saskatchewan Ave., Winnipeg.

3300, 3301. July 12.—Authorizing Bell Telephone Co. to place its wires across M.C.R. tracks at different points.

3302. July 19.—Authorizing G.T.R. to construct its railway across certain highways between the west end of Belœil Bridge and mileage 21.20 to 25, east of St. Hilaire station, Que.

3303. July 19.—Authorizing Guelph and Goderich Ry. to open for traffic its line between Milverton and Blyth, Ont.

3304. July 19.—Authorizing C.P.R. to open for traffic its Sudbury-Kleinburg branch from Craighurst to Bala, Ont.

3305 to 3307. July 5.—Authorizing Bell Telephone Co. to place its wires across certain railway tracks.

3308. July 6.—Requiring railway companies, subject to the Parliament of Canada, to furnish to the Board on or before Oct. 1 next, certain written statements for the year ended June 30, 1907. See pg. 655.

3309. July 4.—See page 655.

3310. July 5.—Authorizing St. Mary's and Western Ont. Ry. Co. to cross under the G.T.R. Sarnia line about 540 ft. west of St. Mary's Jct. station, Ont.

3311. July 17.—See page 655.

3312. July 24.—Approving revised location of G.T. Pacific Ry. from the east line of sec. 4, tp. 12, r. 7, w. 1st m. to the east line of sec. 12, tp. 11, r. 3, w. 1st m., district of Portage la Prairie, Man.

3313, 3314. July 24.—Authorizing Bell Telephone Co. to place its wires across certain railway tracks.

3315. July 24.—Authorizing Ellis Lime and Stone Co. to place wires under G.T.R. tracks between Guelph and Preston, Ont.

3316. July 17.—Granting extension of 60 days from July 19, to the Windsor, Essex and Lake Shore Rapid Ry. Co. to operate its trains for construction purposes only on its railway where it crosses the M.C.R. track at Talbot St., Essex, Ont.

3317. July 25.—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks near Penetang station, Ont.

3318. July 25.—Approving located line of Grand Valley Ry. from lot 18, near Blue Lake, to St. George, Ont.

3319. July 25.—Approving location of Canadian Northern Quebec Ry., St. Jacques branch, from St. Jacques to Rawdon, Montcalm, Que., mileage 0 to 10.

3320. July 24.—Extending to Oct. 1, 1907, time provided in order 2733 for installing interlocking appliances where the G.T. Pacific Ry. tracks cross the C.P.R. at sec. 1, tp. 12, r. 11, w. 1st m., Man.

3321. July 24.—Extending to Nov. 1, 1907, time provided in order 3044 for installation of interlocking plant where G.T. Pacific Ry. tracks cross C.P.R. tracks in sec. 12, tp. 12, r. 19, west of 1st m., Man.

3322. July 24.—Authorizing City of Hamilton to lay a water main under the G.T.R. tracks at Lottridge St.

3323. July 23.—Authorizing Town of Milltown, N.B., to lay a sewer under the St. Stephen and Milltown Ry., where it crosses the town property.

3324. July 23.—Authorizing Bell Telephone Co. to erect its wires across G.T.R. tracks near Belleville station, Ont.

3325. July 23.—Authorizing C.P.R. to construct and operate a spur line at Crombies from its main line into the Superior Portland Cement Co.'s premises, together with another spur branch on the east half of lot 20.

3326. July 23.—Authorizing C.P.R. to construct and operate certain branch lines at The Gap, s.e. ¼ sec. 24, tp. 24, r. 9, west of 5th m., owned by Alberta Portland Cement Co.

3327. July 23.—Extending to Oct. 23, 1907, time provided in order of April 30, for the installation of interlocking plant at crossing of Canadian Northern Ontario Ry. by C.P.R., lot 12, con. 2, tp. Cleland, Nipissing, Ont.

3328. July 23.—Amending order of April 24, authorizing Vancouver, Westminster and Yukon Ry. to cross B.C. Electric Ry. tracks on Powell St., Vancouver, B.C.

3329. July 23.—Authorizing E. R. Machum, St. John, N.B., to lay a pipe under the C.P.R. track near Woolastook station, N.B.

3330. July 23.—Authorizing Provincial Light, Heat and Power Co. to cross C.P.R. track near Rockfield, Que., with a 44,000 volt power transmission line.

3331. July 25. — Authorizing Hastings Telephone Co. to place its wires across G.T.R. tracks at public road, 4th con., tp. Thurlow, Ont.

3332. July 25.—Authorizing the Morris and Kemp Telephone Co. to place its wires across C P.R. tracks 6 miles south of Ottawa, Ont.

3333. July 25.—Approving plans of proposed work on bridge at Prospere road, C.P.R. Quebec section.

3334. July 23.—Authorizing the Board of Water, Light and Telephone Commissioners of Fort William, Ont., to place a temporary pole across the C.P.R. track in Ft. William for the purpose of carrying power to the applicants' works at Loch Lomond.

3335 to 3340. July 20.—Authorizing Bell Telephone Co. to place its wires across certain railway tracks.

3341, 3342. July 23.—Authorizing Clarenceville and St. Thomas Local Telephone Co. to place its wires across G.T.R. tracks, St. Thomas parish, Missisquoi, Que.

3343. July 25.—Approving revised location of Qu'Appelle, Long Lake and Saskatchewan Ry. between Lumsden and Disley, Sask., through tp. 19, rgs. 21 and 22, west of 2nd m., mileage 20.0 to 28.3.

3344. July 4.—Authorizing Central Vermont Ry. to erect and maintain a level farm crossing on Campbell's land, Bedford district, Que.

3345. July 4.—Authorizing C.P.R. to maintain protection on certain streets in Almonte, Ont., and to construct a subway there.

3346. July 5.—See page 639.

3347. July 4.—Authorizing C.P.R. to make changes in its railway from Pembroke station to about 3,200 ft. west thereof.

3348. July 18.—Authorizing C.P.R. and Calgary and Edmonton Ry. to construct and maintain a highway crossing over the C. & E.R., on Main St., Leduc, Alta.

3349. July 26.—Authorizing Town of Preston, Ont., to lay a water pipe under G.T.R. tracks.

3350. July 29.—Authorizing the City of Hamilton to construct Trolley St. across G.T.R. tracks.

3351. July 26.—Approving plans of new work on bridge 38.3 on C.P.R. MacLeod section, Alberta.

3352. July 26.—Approving plans of new work on bridge on C.P.R. Edmundston branch, Grand Falls, N.B.

3353. July 26.—Approving plans of new work on bridge on C.P.R. Schreiber section, Ont.

3354. July 26.—Approving plans of new work on bridge on C.P.R. MacLeod branch, Alberta.

3355. July 26.—Approving revised location of Canadian Northern Quebec Ry. at Jacques Cartier River, Portneuf tp., Que.

3356. July 26.—Approving proposed deviation of Canadian Northern Ry. from Kakabeka easterly to Slate River, Rainy River district, Ont., 9.76 miles.

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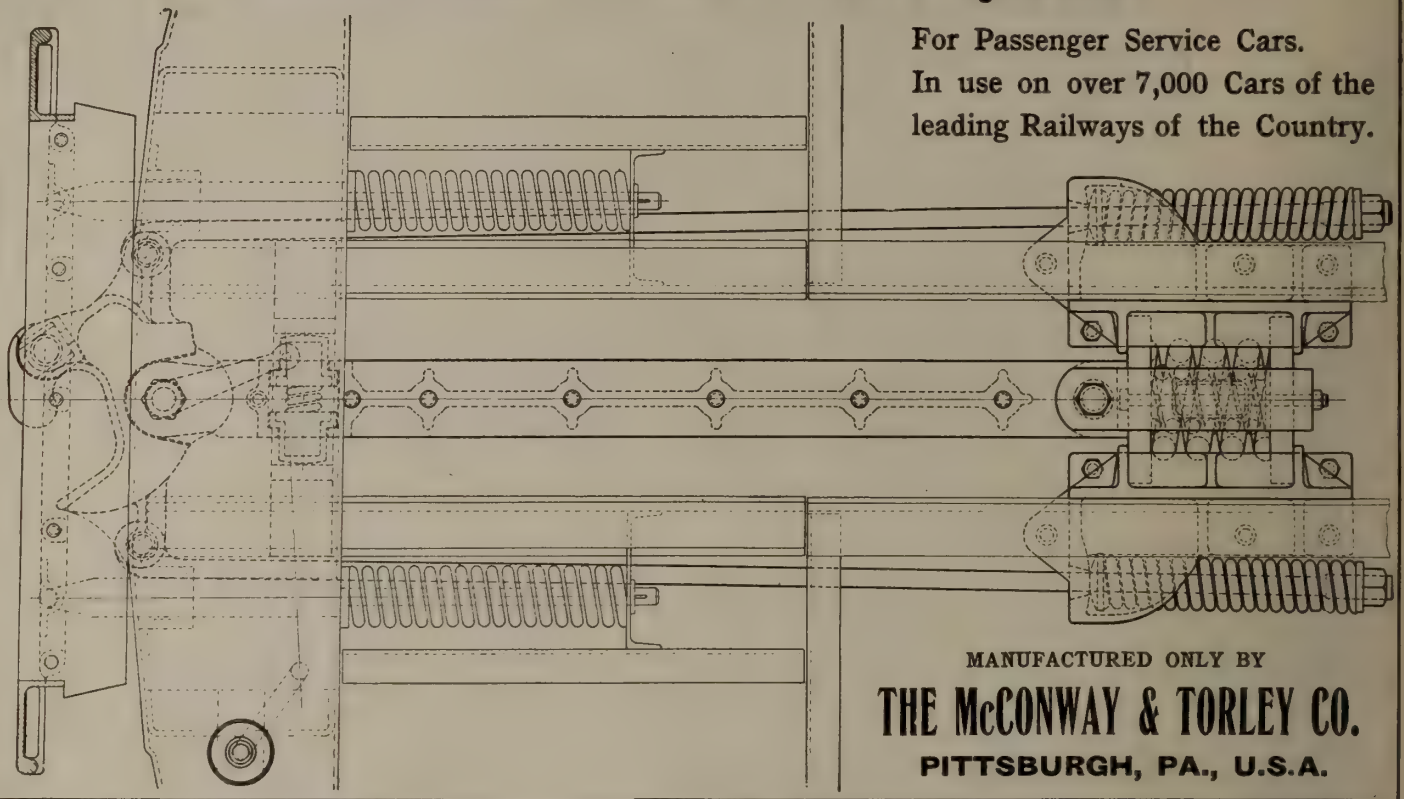

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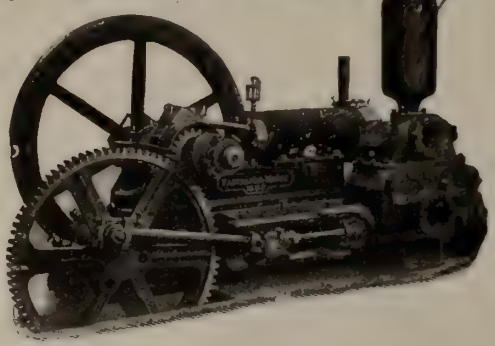

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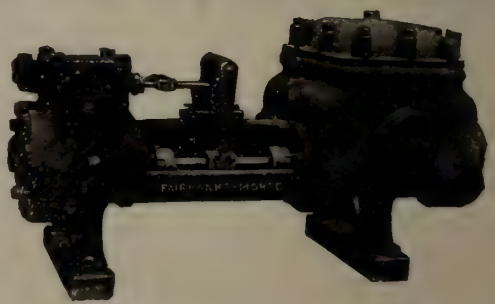

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3357. July 26.—Approving plans of new work on bridge on C.P.R. Nepigon section, Ont.

3358. July 29.—Authorizing the Monarch Brass Mfg. Co. to lay a gas main under G.T.R. tracks at Alma St., Port Colborne, Ont.

3359. July 29.—Authorizing C. E. Steele to lay gas mains under G.T.R. tracks in Port Colborne and Humberstone tp., Ont.

3360. July 29.—Authorizing Port Dover Gas Supply Co. to lay gas pipe under G.T.R. tracks in Port Dover, Ont.

3361. July 29.—Amending order 1334 by granting City of Hamilton leave to apply for an order permitting it to construct a subway under the G.T.R. tracks at Ferguson Avenue,

3362. July 29.—Authorizing the City of Hamilton to construct sewers under G.T.R. tracks at different points.

3363, 3364. July 26.—Authorizing the Bell Telephone Co. to erect wires across different railway tracks.

3365. July 30.—Authorizing Windsor, Essex and Lake Shore Rapid Ry. to cross Pere Marquette Rd. near Kingsville station, Ont., for construction purposes only, for three months from date of order, pending installation of interlocking plant provided in order of May 4, 1906.

3366. July 30.—Authorizing Windsor, Essex and Lake Shore Rapid Ry. to cross Pere Marquette Ry. near Pelton station, Ont., for construction purposes only, for three months from date of order, pending installation of interlocking plant provided for in order of May 4, 1906.

3367. July 30.—Approving location of St. Mary's and Western Ont. Ry. from the boundary line between Perth and Oxford counties, to the s.w. side of Queen St., St. Mary's, Ont., 3.67 miles.

3368. July 30.—Authorizing C.P.R. to construct a spur line from its main line near Nelson, B.C., to the Canada Zinc Co.'s premises, Nelson, B.C.

3369. July 30.—Authorizing C.P.R. to construct a spur line to the Barron Brick Co.'s premises, Weston, Ont.

3370. July 29.—Authorizing G.T.R. to construct two additional tracks in Hamilton, Ont., west of Victoria Ave., to Gage's spur, near the eastern limit of the city; and from a street midway between Wentworth St. and Sherman Ave., to Gage's spur.

3371. July 30.—Authorizing C.P.R. to construct spur line to the North Star Lumber Co.'s premises, Cranbrook, B.C

3372. July 30.—Authorizing the C.P.R. to construct a spur line to R. A. Jelly & Co.'s premises, Shelburne, Ont.

3373. July 30.—Authorizing C.P.R. to construct spur line to A. E. Watts's premises, Proctor, B.C.

3374. July 26.—Ordering Alberta Railway and Irrigation Co. to reduce its rates to 4c. per mile, and to furnish return tickets at the rate of 1 2-3 times the rate for the single journey; effective Aug. 1, 1907.

3375. July 31.—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks near Weston, Ont.

3376. July 31.—Authorizing Town of Moosomin, Sask., to lay a pipe under C.P.R.

3377. July 30.—Authorizing the C.P.R. to construct spur lines to Modern Stone Co.'s premises, Winnipeg.

3378. July 31.—Authorizing G.T.R. to construct a spur line to Ramapo Iron Works Co.'s premises, Niagara Falls, Ont.

3379. July 31.—Authorizing Burgessville Telephone Co. to place its wires across G.T.R. tracks in North Norwich, Ont.

3380. July 31.—Authorizing Kneister Telephone Co. to place its wires across G.T.R. tracks in Tilbury North, Ont.

3381. July 31.—Authorizing G.T.R. to construct an extension of its branch line on Mill St., Toronto, as authorized by order of Aug. 11, 1903.

3382, 3383. July 31.—Authorizing the Bell Telephone Co. to place its wires across certain railway tracks.

3384. July 31.—Authorizing Morris and Kemp Telephone Co. to place its wires across C.P.R. tracks near Ottawa, Ont.

3385. July 31.—Authorizing Armstrong Light and Power Co. to place its wires across Shuswap and Okanagan Ry. tracks.

3386. Aug. 1.—Authorizing C.P.R. to open for carriage of traffic its Lachine Canal South Bank branch from Highlands to station 3.14, near Quebec.

3387. July 31.—Authorizing the Morris and Kemp Telephone Co. to place its wires across C.P.R. tracks south of Ottawa, Ont.

3388 to 3394. Aug. 1.—Authorizing the Central Ontario Ry. to cross certain public highways in Monteagle, Herschel, Wicklow and McClure townships, Ontario.

3395. July 29.—Authorizing Consumers Gas Co. Toronto, to lay a gas main pipe under G.T.R. tracks at Eastern Avenue, Toronto.

3396. Aug. 6.—Authorizing Kneister Telephone Co. to cross C.P.R. tracks in Tilbury North, Ont.

3397. Aug. 6.—Rescinding order 2370 granting leave to Montreal St. Ry. to cross C.P.R. tracks where they intersect Papineau Ave., Montreal.

3398. Aug. 7.—Authorizing Bell Telephone Co. to place its wires across C.P.R. tracks at Lindsay, Ont.

3399. Aug. 7.—Authorizing C.P.R., exercising franchises of Toronto, Grey and Bruce Ry., to construct a spur line to Weston Sanitary Packing Co.'s premises, Weston, Ont.

3400, 3401. Aug. 7.—Approving plans of permanent work on bridges on C.P.R. at Pembroke, Ont.

3402 to 3408. Aug. 7.—Authorizing Central Ontario Ry. to cross certain public highways in Monteagle, Herschell, Wicklow and McClure townships.

3409. Aug. 7.—Authorizing G.T.R. to construct an additional track across Ottawa Ave., South River village, Ont.

3410. Aug. 7.—Approving site of Central Ontario Ry. station at Maynooth, Ont.

3411. Aug. 7.—Authorizing the C.P.R., exercising franchises of Guelph Jct. Ry. Co., to construct and operate spur line to the Standard Fitting and Valve Co.'s premises, Guelph, Ont.

3412 Aug. 7.—Authorizing C.P.R. to construct spur lines in St. Louis, Que., from its main line between Mile End station and St. Martin's Jct. to the premises of Brandrum, Henderson Co.'s premises.

3413. Aug. 7.—Authorizing G.T.R. to construct a spur line from its station yard at Belle River, Ont., to the Canadian Camera Co.'s premises.

3414 and 3415. Aug. 9.—Authorizing Bell Telephone Co. to place its wires across C.P.R. tracks.

3416. Aug. 9.—Approving location of Walkerton and Lucknow Ry. mileage 26.78 to 30.51, passing through Hanover, Ont.

3416. Aug. 9.—Approving deviation of Walkerton and Lucknow Ry. from mileage 26.78 from Proton to mileage 29.98 of the portion already approved, passing through Hanover, Ont.

3417. Aug. 13.—Authorizing Town of Victoriaville, Que., to lay sewer and water pipes under the G.T.R.

3418 to 3424. Aug. 13.—Authorizing Bell Telephone Co. to place wires across various railway tracks.

3425. Aug. 13.—Authorizing C.P.R. to construct bridge 85.5, Mountain section.

3426. Aug. 13.—Authorizing C.P.R. to construct bridge 119.7, Smith's Falls section.

3427. Aug. 13.—Authorizing G.T.R. to construct and operate a spur line from west of its Campbellford, Ont., station, to the Northumberland Paper and Electric Co.'s premises.

3428. Aug. 13.—Approving portion of C.P.R., Regina branch, from mileage 0 to 95.8.

3429. Aug. 9.—Authorizing Canadian Northern Quebec Ry. to construct its line across the St. Foye and St. Louis roads near Cap Rouge, at mileage 2.85 west from Quebec bridge, by diverting the St. Foye road and carrying the St Louis road underneath the railway.

3430. Aug. 14.—Authorizing the Vancouver, Victoria and Eastern Ry. to construct a branch line from the n.e. quarter of sec. 15, tp. 16, New Westminster district, to the International boundary at Huntingdon, B.C.

3431. Aug. 14.—Amending order of July 2, on the complaint of Watson Jack & Co., by striking out the word "Montreal" in the 1st line of the operative part, and striking out the words "steamship to the carter" in the 5th line of the operative part, and substituting therefor the words "carter to the car."

3432. Aug. 13.—Authorizing the G.T.R. to construct and operate a spur line from northwest of Tecumseh St., Woodstock, Ont., southerly along east side of Tecumseh St. to First St., and along the south side of First St.

3433. Aug. 16.—Authorizing Canadian Northern Quebec Ry. to build second track over Montreal Street Ry. at Notre Dame St., Viauville, Que.

3434. Aug. 6.—Authorizing Dominion Department of Public Works to lay and maintain a drain pipe under G.T.R. tracks in Belleville, Ont.

3435. Aug. 14.—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks over Dundas St. bridges, Toronto.

British Columbia Towage Rates.

Following are the lumber towage rates in British Columbia:

FROM	Bellingham and Anacortes	Blaine	Vancouver
Squamish per m.	$ .20	$ .80	$ .90
Vancouver	. . .	.60	.75
Wilson Creek	.35	.75	.90
Harris Camp	.40	.75	.90
Jervis Inlet	.85	1.25	1.25
Vancouver Bay	.60	1.00	1.10
Captain Island	.50	.90	1.00
Sechelt Inlet	.60	1.00	1.10
Thunder Bay	.50	.90	1.00
Porpoise Bay	.75	1.10	1.10
Bute and Toba Inlets	.00	1.25	1.25
This side Yucaltaw Rap's	.75	1.00	1.25
Discovery Passage	1.00	1.25	1.25
Hole-in-the-Wall	1.00	1.25	1.25
Between Yucaltaw Rapids and Johnston Str'ts.	1.00	1.25	1.25
Johnston Straits to Entrance Knight Inlet	1.25	1.50	1.50
Knight Inlet	1.50	1.75	1.75
Drury, Kingdom Inlets and Greenway Sound	1.50	1.75	1.75
Comox	1.00	1.25	1.25

Towage from any of the above places to Chemainus or Nanaimo same rate as to Vancouver.

Towage to New Westminster and Victoria, 25c. per m. more than to Vancouver.

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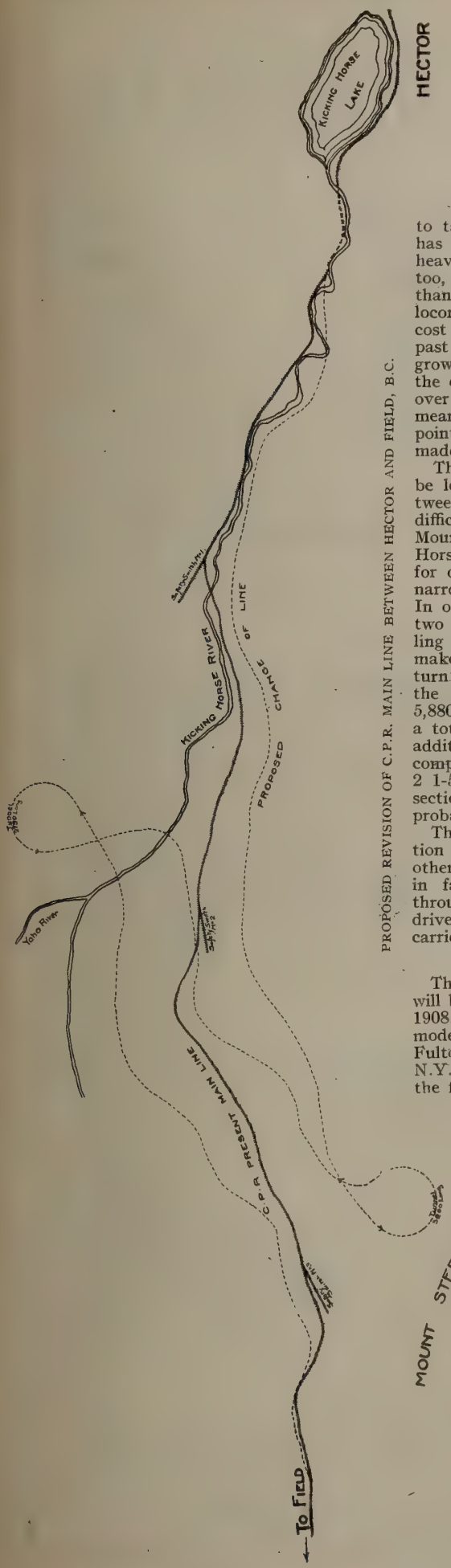

PROPOSED REVISION OF C.P.R. MAIN LINE BETWEEN HECTOR AND FIELD, B.C.

C.P.R. Grade Revision in the Rockies.

Plans have been approved for the grade revision on the C.P.R. main line between Hector and Field in the Rocky Mountains. Between these two points the controlling gradient has been 4.5 or 4½ ft. of rise in every 100. This has been a great drawback in the handling of traffic, for in order to take a passenger train over this hill it has been necessary to attach two or three heavy locomotives. With freight trains, too, it has been impossible to handle more than half a dozen loaded cars with a single locomotive, adding great delays and a heavy cost to the shipping of goods. During the past few years traffic over this line has grown tremendously, and for the last year the company's engineers have been looking over the ground in an endeavor to find some means of making the grade lighter at this point. A number of surveys have been made, all with this object in view.

The only way in which the gradient can be lessened is by lengthening the line between Hector and Field, and this is a most difficult and expensive proposition. With Mount Selkirk on one side and the Kicking Horse river on the other, there is little room for operations of this sort, for the pass is narrow and crooked up to the summit. In order to get the requisite length of line, two loops will be built, the railway doubling back on itself. There is no room to make the loops in the open and to get the turn they will be cut in the solid rock of the mountains. The two tunnels will be 5,880 and 3,400 ft. long respectively, giving a total tunnel of 9,280 ft. in length. The additional distance gained will permit the company to reduce the gradient to 2.2 or 2 1-5 ft. in every 100. The work on this section will be begun at once, though it will probably take a couple of years to complete.

The accompanying plans show the location which has been approved. Several other lines were laid out, but were abandoned in favor of the present one. The rock through which the tunnels will have to be driven is limestone, and the work will be carried on from either end where possible.

The International Maritime Exposition will be opened at Bordeaux, France, May 1, 1908. Among the exhibits will be working models of the Clermont in which Robert Fulton sailed up the Hudson to Albany, N.Y., April 16, 1807, and of his Nantalis, the first submarine boat constructed.

The British Columbia Legislature recently granted a life pension to Miss Harriet Fraser, daughter of Simon Fraser, who discovered the Fraser River and traced it to its source. Miss Fraser, who was 80 years of age, was critically ill in Toronto, where she has resided for some years, when the news of the pension was received and died a few days later.

The Northern Quebec Mining and Development Co., Ltd., has been incorporated under the Quebec Companies' Act, with a capital of $100,000 and offices at Quebec, to carry on prospecting, mining, smelting and kindred industries and in connection therewith to construct tramways, wharves and docks, and to operate steam and other vessels. The provisional directors are: E. F. Wurtele, J. D. Cameron, J. C. McLimont, J. T. Ross and J. G. Scott, General Manager Quebec and Lake St. John Ry.

September Birthdays.

Many happy returns of the day to—

G. W. Alexander, Local Treasurer G.T.R., Western Lines, Detroit, Mich., born at Lightcliff, Yorkshire, Eng., Sept. 10, 1859.

W. B. Bamford, District Freight Agent C.P.R., London, Ont., born at Belleville, Ont., Sept. 10, 1863.

W. D. Barclay, ex-Manager Alberta Ry. and Coal Co. and Great Falls and Canada Ry, now of Foley Bros., Larsen & Co., contractors, St. Paul, Minn., born at Campbellton, N.B., Sept. 23, 1852.

G. T. Bell, General Passenger and Ticket Agent, G.T.R., Montreal, born there Sept. 7, 1861.

W. H. Biggar, K.C., General Solicitor G.T.R., Montreal, born at the Carrying Place, near Trenton, Ont., Sept. 19, 1852.

E. R. Bremner, Division Freight Agent, Ottawa Division, G.T.R., Ottawa, born in Toronto, Sept. 9, 1875.

M. H. Brown, General Freight Agent, Ontario Division, C.P.R., Toronto, born at Victoria Square, Ont., Sept. 2, 1866.

F. R. F. Brown, ex-Mechanical Superintendent Intercolonial Ry., now at Montreal, born at Helensburg, Dumbartonshire, Scotland, Sept. 29, 1845.

W. G. Brownlee, General Transportation Manager G.T.R., Montreal, born at Lawrenceville, Ill., Sept. 9, 1858.

J. R. Bruce, Traffic Auditor Intercolonial Ry., Moncton, N.B., born at Portsoy, Banffshire, Scotland, Sept. 23, 1848.

W. B. Bulling, Assistant Freight Traffic Manager, Eastern Lines, C.P.R., Toronto, born in Montreal, Sept. 16, 1858.

R. L. Burnap, General Freight Agent Central Vermont Ry., St. Albans, Vt., born Sept. 20, 1872.

C. F. Burns, Acting Auditor of Disbursements Intercolonial Ry., Moncton, N.B., born at Clements Port, N.S., Sept. 10, 1854.

A. D. Cartwright, Secretary Board of Railway Commissioners, Ottawa, born at Kingston, Ont., Sept. 20, 1864.

W. F. Egg, ex-City Passenger Agent C.P.R., Montreal, born at Plymouth, Eng., Sept. 7, 1859.

A. W. Ecclestone, Southern Passenger Agent, Central Vermont Ry., New York, born at Hamilton, Ont., Sept. 25, 1858.

F. A. Folger, jr., Trainmaster Canadian Northern Ry., North Battleford, Sask., born at Kingston, Ont., Sept. 17, 1865.

C. B. Foster, District Passenger Agent, C.P.R., Toronto, born at Kingston, N.B., Sept. 30, 1871.

L. A. Hamilton, ex-Land Commissioner, C.P.R., born at Penetanguishene, Ont., Sept. 30, 1852.

L. B. Howland, President and General Manager, Irondale, Bancroft and Ottawa Ry., Irondale, Ont., born at Lambton Mills, Ont., Sept. 2, 1869.

G. R. Huntingdon, General Superintendent Minneapolis, St. Paul and Sault Ste. Marie Ry., Minneapolis, Minn., born Sept., 1867.

J. E. Hutcheson, Superintendent Ottawa Electric Ry., Ottawa, born at Brockville, Ont., Sept. 15, 1858.

A. C. Killam, Chairman Board of Railway Commissioners for Canada, Ottawa, born at Yarmouth, N.S., Sept. 18, 1849.

W. H. Kelson, ex-General Storekeeper C.P.R., now of the W. H. Kelson Co., Montreal, born at Bath, Eng., Sept. 5, 1850.

R. E. Larmour, freight agent C.P.R., Fort William, Ont., born at Brantford, Ont., Sept. 26, 1868.

H. D. Lumsden, C.E., Chief Engineer National Transcontinental Ry., Ottawa, born at Belhaire, Scotland, Sept. 7, 1844.

J. Bruce Macdonald, Director Niagara Navigation Co., born at Glengarry, Ont., Sept. 19, 1850.

J. F. Mundle, city freight agent C.P.R., Montreal, born at Prescott, Ont., Sept. 20, 1857.

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HIGH-CLASS CARS ONLY
From 14 to 75 H.P.

45 H.P. Six-Cylinder Car.

Prices Range from $3,500 to $10,000

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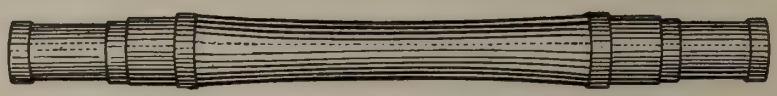
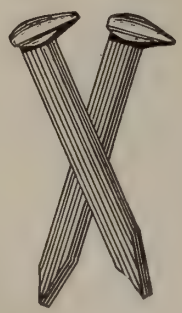
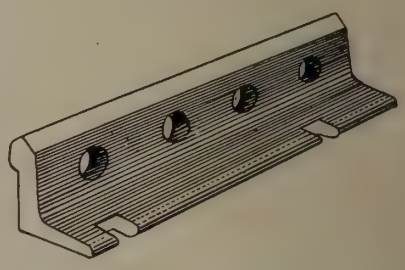




AXLES

CAR AND LOCOMOTIVE



Railway Angle Bars and Track Spikes

FORGINGS MARINE AND RAILROAD

Pig Iron, Iron and Steel Bars

B. S. Murray, Route Agent Canadian Express Co., London, Ont., born at Glenwood, N.Y., Sept. 17, 1856.

E. D. Nash, Superintendent Southern Division Central Vermont Ry., New London, Conn., born at Shelburne Falls, Mass., Sept. 24, 1852.

J. Oborne, General Superintendent Ontario Division C.P.R., Toronto, born at Montreal, Sept. 19, 1861.

S. N. Parent, Chairman National Transcontinental Ry. Commission, Ottawa, Ont., born at Quebec, Sept. 12, 1855.

E. D. Parker, Assistant General Freight Agent, Minneapolis, St. Paul and Sault Ste. Marie Ry., St. Paul, Minn., born at Granville, Ohio, Sept. 20, 1839.

J. Paul, General Freight Agent Niagara, St. Catharines and Toronto Ry., born in Euphrasia tp., Grey County, Ont., Sept. 13, 1858.

R. W. Perry, C.P.R. ticket agent, Bracebridge, Ont., born at Whitby, Ont., Sept. 2, 1850.

W. D. Robb, Superintendent Motive Power G.T.R., Montreal, born at Longueuil, Que., Sept. 21, 1857.

W. H. Rosevear, General Car Accountant G.T.R., Montreal, born at Wadebridge, Cornwall, Eng., Sept. 26, 1837.

A. L. Smith, Superintendent C.P.R., Toronto, born there Sept 23, 1866.

E. W. Taylor, General Freight Agent Reid Newfoundland Co., born at Carbonear, Nfld., Sept. 8, 1870.

W. Whyte, 2nd Vice-President C.P.R., Winnipeg, born at Charleston, Scotland, Sept. 15, 1843.

H. A. Young, Traffic Manager, Canadian Lake Line, Toronto, born at Brooklyn, N.Y., Sept. 1, 1864.

Railway Commissioners' Traffic Orders.

3309. July 4.—In pursuance of the powers conferred upon it by secs. 8, 333, and 334 of the Railway Act, and of all other powers possessed by the Board in that behalf, the Board orders that every railway company subject to the legislative authority of the Parliament of Canada furnish to the Board within three months from the date of this order the following information, viz.:

The railway company or companies with which it has direct connection in Canada, and the point or points with which such connection is made, the said information to be set forth in column order from east to west and from south to north, showing the junction point or points opposite the railway with which such connection is made.

The railway company or companies with which every such company has joint freight tariffs filed with the Board, giving the C.R.C. numbers of the said tariffs and the junction points through which they apply.

Whether every such company is willing to extend the scope of such joint tariffs by routing also through the junctions (if any) not already utilized, or to arrange joint tariffs through such other points. If not, to state fully its reasons therefor.

Any and all railway company or companies with which every such company has no joint tariffs, and whether such company is prepared to negotiate with such connecting company or companies for joint tariffs; if not, to state fully the reasons for objecting.

GRAIN AND MILL STUFFS FOR ASIA.

3311. July 17.—In the matter of the application of the C.P.R. Co. to the Board under secs. 339 and 342 of the Railway Act for permission to issue special rate notices prescribing freight rates lower than the rates published in the company's freight tariffs to Vancouver, New Westminster, or Victoria, British Columbia, applicable on traffic in grain and mill stuffs to either of the said points for export by water to Asia whenever, in consequence of competition in such traffic prevailing from any point or points in the United States to any port or ports in the U.S. on the Pacific Coast, the company finds it necessary to reduce its rail rates to either of the said ports in B.C. in order to encourage such traffic between Canada and Asia: Upon the report and recommendation of the Chief Traffic Officer of the Board, it is ordered that the C.P.R. Co. is hereby authorized to issue special rate notices under the circumstances and conditions recited above, the said notices to bear the designating letter Z, and, in addition to the rail rate to Vancouver, Victoria or New Westminster, the ocean rate therefrom. It is further ordered that a copy of each and every special rate notice issued under this order shall be filed with the Board without delay, and shall show, for the information of the Board, the ocean rate or rates from the port or ports in the U.S., or other circumstances which has or have made the special rate notice necessary, and the rail rate to the port in question in B.C. which should be charged in the absence of such notice.

ALBERTA RAILWAY AND IRRIGATION CO.

3374. July 26.—It is ordered that the tolls in the standard passenger tariffs of the Alberta Railway and Irrigation Co. be reduced to the rate of 4c. per mile travelled. That the company furnish return tickets for transportation of passengers from any point on its line to any other point and back to the place of starting at the rate of 1 2-3 times the rate for the single journey between those points. That this order come into effect on Aug. 1, 1907, on and after which date the company shall not charge higher rates for passenger traffic than 4c. per mile. That the necessary tariffs be forthwith prepared by the company and filed with the Board.

Rebating by the C.P.R. Denied.

At a sitting of the Beef Commission in Winnipeg recently, J. B. Lauzon, a local butcher, stated that in shipping big dealers got a rebate of $10 a car, and that smaller dealers were not allowed this. He added that he knew this because he had a brother in Montreal who handled 64,000 cattle last year. The witness shipped to Montreal last year, but after the expenses and the freight were reckoned he lost $360.

In reference to this evidence F. W. Peters, Assistant Freight Traffic Manager C.P.R., says: "Statements of this character are made by irresponsible people, who are unable to substantiate what they assert. To the statement itself I give an unqualified denial. When I learned that the assertion had been made before the Commission, I requested W. B. Lanigan, who is in direct charge of our freight shipments, to attend the session of the Beef Commission and to deny the allegation under oath. The opportunity was not afforded us to appear before the Commission, owing to the fact that the session had closed, but we made application to be permitted to appear when the Commission again sits in the city, when one of the officials will appear and give evidence in rebuttal of this assertion. I wish to repeat what I have said that the C.P.R., in dealing with shippers, has granted no rate to the largest patron of the company which was not granted to the smallest shipper. Such statements as that made before the Commission do much harm to the entire country."

Railway Rolling Stock Notes.

The New Brunswick Coal and Ry. Co. has received 10 hopper cars.

The Temiskaming and Northern Ontario Ry. has ordered six locomotives from the Canadian Locomotive Co., Kingston, Ont.

The Toronto, Hamilton and Buffalo Ry. has received six first-class passenger coaches, and two combination smoking and baggage coaches from the U.S.

The Temiskaming and Northern Ontario Ry. Commission is asking bids for four vans, two baggage and express cars, and two baggage and mail cars.

The three switching locomotives which the C.P.R. is constructing at its Angus, Montreal, shops are duplicates of the U-3e class, which are 6-wheel coupled, with cylinders 18 in. diameter by 26 in. stroke; working pressure, 200 lbs.; driving wheels, 52 in.

The Dominion Dump Car Co., Ltd., Montreal, has sold to Macdonnell & O'Brien, 15 improved Hart convertible cars, 34 ft. long and of 40 ton capacity. These cars are duplicates of those supplied to the G.T. Pacific Ry., which have already been described in our columns.

There has been deposited with the Secretary of State at Ottawa an agreement made between the Imperial Rolling Stock Co. and the Canadian Northern Ry., and a copy of a mortgage made between the Imperial Rolling Stock Co., the National Trust Co., and the Canadian Northern Ry. Both documents are dated July 26.

The Canadian Northern Ry.'s orders for locomotives for 1908 delivery include 40 consolidation locomotives to be built by the Canadian Locomotive Co., Kingston, Ont., for delivery commencing in March, and 45 to be built by the Locomotive and Machine Co. of Montreal, the deliveries of which commence in Dec. of this year for the 20 consolidations, and in Jan. for the 25 ten-wheel locomotives.

The Canadian Northern Ry. has received the following additions to rolling stock, 23 stock cars and 4 coaches from Crossen Car Mfg. Co., Cobourg, Ont.; 332 box cars, 4 coaches and 1 mail and express car from Rhodes, Curry & Co., Amherst, N.S.; 3 ten-wheel locomotives from Canada Foundry Co., Toronto, 2 consolidation locomotives from Canadian Locomotive Co., Kingston, Ont., and 2 parlor and 3 palace cars from the U.S.

The C.P.R. is having built at its Farnham, Que., shops an official car for one of its General Superintendents. It will be 35 ft. by 8 ft. 11 in. over all, with body and underframe of wood; axles, M.C.B., 4¼ by 8 in.; bolsters, 6 in. plate; brake beams, Simplex; brake shoes, steel back diamond S.; brakes, Westinghouse air; brasses, 4¼ by 8 in., M.C.B.; couplers, Tower; heating system, Wm. C. Baker; journal boxes, McCord malleable; platforms, van type; roof canvas.

The specifications for the 74 flat cars, 60,000 lbs. capacity, which the C.P.R. is having built at its Angus, Montreal, shops, provide for: Length, 36 ft. 8 in.; width, 8 ft. 10 in.; body and underframe, wood; bolsters, Simplex with Susemihl side bearings; brake beams, Simplex; brake shoes, steel back diamond S.; brakes, Westinghouse air; brasses, 4¼ by 8 in., M.C.B.; couplers, Tower malleable with solid steel knuckles; journal boxes, McCord; trucks, all steel diamond pattern with Barber rollers; wheels, 33 in. cast iron.

A recent statement given out at Montreal says that very nearly the whole of the $7,000,000 of rolling stock ordered by the G.T.R. had been delivered. Of the 60 new passenger cars, costing $12,000 each, 30

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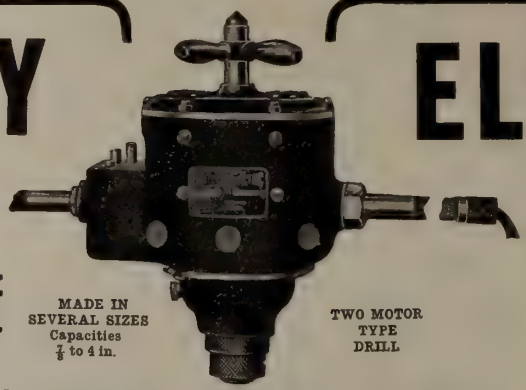
AIR COOLED PORTABLE



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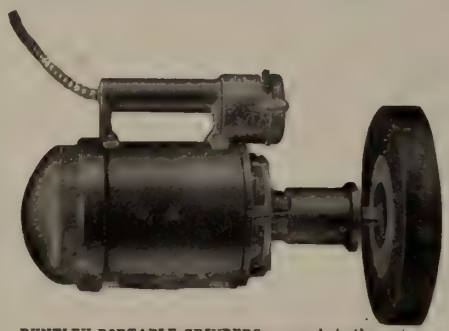

DUNTLEY PORTABLE GRINDERS are made in three sizes carrying 5 to 10 in. wheels

FIRST COST IS SAVED
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EVERY TOOL GUARANTEED
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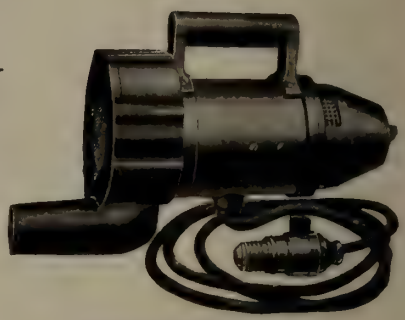

DUNTLEY PORTABLE BLOWER
For blowing dust out of machinery

WRITE FOR CATALOGUE

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CHICAGO PNEUMATIC TOOL CO., CHICAGO—NEW YORK

N. J. Holden Company, Limited, Montreal, General Sales Agents for Canada

N. CURRY, President
N. A. RHODES, Vice-President

CAPITAL, $1,000,000

J. M. CURRY, Sec.-Treas.

RHODES, CURRY & CO.

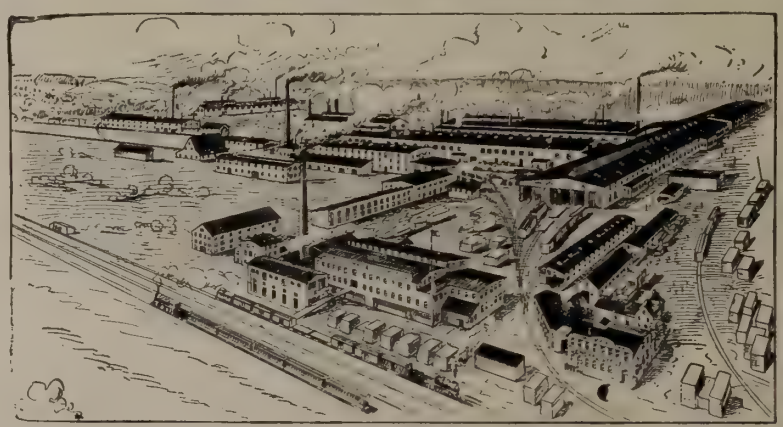
AMHERST, NOVA SCOTIA LIMITED

RAILWAY AND STREET CARS

SPECIAL CARS FOR ALL PURPOSES

Capacity per Month

300 Freight Cars
4 Passenger Cars
4 Snow Plows
3,000 Car Wheels



Capacity per Month

2,500 Car Axles
500 Tons Castings
1,000 Tons Forgings
1,000 Tons Bar Iron and Steel

Car Wheels, Axles, Forgings, Castings, Bar Iron & Steel, Etc.

have already been delivered, and the remaining 30 will be delivered shortly. There were 100 locomotives ordered to cost $15,000 each, and 60 of them have been delivered. There were 5,200 freight cars of all kinds ordered at an average cost of $850 each, and of these 4,500 have been delivered.

The specifications of the rolling stock under construction at the C.P.R. Angus, Montreal, shops, on orders mentioned in our Aug. issue as similar to those for cars previously described as follows: The three 72 ft. 1st class cars without smoking rooms, similar to the 25 described on pg. 165, Mar.; the mail and express car similar to the 15 described on the same page; the 21 stock cars similar to those described on the same page; the 27 colonist cars similar to those described on pg. 17, Jan.; the 60 vans similar to the 13 described on pg. 413, June.

The specifications for the 400 box cars and the 25 refrigerator cars which the Intercolonial Ry. is having built by Rhodes, Curry & Co., Amherst, N.S., provide as follows:

Box Cars.—Weight, 41,800 lbs.; length, inside, 36 ft.; height, inside, 8 ft.; height, over all, 13 ft. 5 in.; width, inside, 8 ft. 6 in.; body and underframe, wood.

Refrigerator Cars.—Weight, 44,000 lbs.; length, inside, 28 ft. 9½ in.; height, inside, 7 ft. 6⅜ in.; height, over all, 13 ft. 3 in.; width, inside, 8 ft. 1¼ in.; body and underframe, wood.

Special Equipment.—M. C. B. axles, automatic couplers, and springs; railway standard trucks; Simplex body and truck bolsters, center bearings; Susemihl side bearings; Canadian Bronze Co.'s journal bearings; McCord journal boxes.

The C.P.R. is having built at its Angus, Montreal, shops two 30-ton refrigerator cars, the specifications for which provide: Length, over sills, 41 ft.; width, over sills, 9 ft. 1⅝ in.; length in clear between ice boxes, 34 ft. 6 in.; width inside, 8 ft. 3⅝ in.; height from top of slats to ceiling, 7 ft. 6½ in.; height from top of slats to meat rack, 6 ft. 11 in.; body, wood; axles, 5 by 9 in., M.C.B.; bolsters and brake beams, Simplex; brake shoes, steel back diamond S.; brakes, Westinghouse air; brasses, 5 by 9 in., M.C.B.; couplers, Tower malleable with solid steel knuckles; trucks, 5 by 9, Barber roller, Simplex, of steel, diamond pattern; wheels, 33 in. cast iron.

The 22 steel hopper bottom ore cars, 100,000 lbs., for which the C.P.R. recently placed an order, will have the following general dimensions, etc.: Length, inside body, 26 ft. 7⅛ in.; width, inside body, 9 ft. 6 in.; length, over buffers, 28 ft. 8 in.; width, over side stakes, 10 ft. 0⅝ in.; height from rail to top of body, 9 ft. 0⅝ in.; body and underframe, steel; axles, 5½ by 10 in., M.C.B., steel; bolsters, Simplex; brake beams, Simplex; brakes, Westinghouse air, 10 in. equipment; brasses, 5½ by 10 in., M.C.B.; couplers, Tower of steel; journal boxes, McCord malleable; trucks, Barber roller, Simplex, diamond pattern, steel; wheels, 33 in. cast iron.

Two parlor cars—the Humber and the Michipicoten—which the C.P.R. has added to its rolling stock for the Montreal-Ottawa run, have a new arrangement of the platform, which is a distinct improvement upon the prevailing type. In the older cars the outside vestibule doors can only be opened from the inside by lifting up the platform section and pulling back the door. Upon these two cars there is provided on the outside a pedal which, when pressed down causes the platform to break in the center, releasing the door, which flies open. By this arrangement the outside door can be opened from the outside as well as the inside of the car, and will prevent the occurrence of such an accident as that by which Homer Taylor, a Montreal railway supply man, was killed near Alexandria, Ont., Oct. 21, 1906.

The C.P.R. has placed an order in the U.S. for 1,000 box cars of similar dimensions, etc., to the 143 recently ordered at its Angus, Montreal, shops. The specifications provide: Length, 36 ft. 8 in., over sills; length, inside, 36 ft.; width, over frame, 9 ft. 0⅝ in.; width, inside, 8 ft. 6 in.; height, inside, 8 ft.; bodies and underframes, wood; axles, 4¼ by 8 in., M.C.B.; bolsters, body and truck, Simplex; brake beams, Simplex; brake shoes, steel back diamond S.; brakes, Westinghouse, air; center bearings, one of malleable iron and one of steel; couplers, Tower malleable with solid steel knuckle; journal bearings, 4½ by 8 in., M.C.B.; side bearings, Susemihl; springs, C.P.R. standard; journal boxes, McCord malleable; trucks, all steel diamond pattern, Barber roller, Simplex; wheels, 33 in. cast steel.

The specifications of the three Roger-Hart convertible ballast cars which the C.P.R. is having built at its Angus, Montreal, shops, provide as follows: Capacity, 40 tons; length inside as gondola car, 34 ft. 10 in.; length inside as hopper car, 24 ft. 6 in.; width, inside, 8 ft. 8 in.; height of sides, 3 ft. 0¼ in.; length over frame, 36 ft. 8 in.; width, over frame, 8 ft. 10 in.; body and underframe, wood; axles, 5 by 9 in., M.C.B.; body and truck bolsters, Simplex; brake beams, Simplex; brake shoes, steel back diamond S.; brakes, Westinghouse air; center bearings, one of malleable and one of steel; couplers, Tower malleable with solid steel knuckles; journal bearings, 5 by 9 in., M.C.B.; side bearings, Susemihl roller; springs, C.P.R. standard; journal boxes, McCord malleable; trucks, all steel, diamond pattern, Barber roller, Simplex, wheels, 33 in. cast iron.

The specifications of the consolidation locomotives which the Canadian Locomotive Co., of Kingston, Ont., is delivering to the Canadian Northern Ry., are as follows: Weight in working order, drivers, 151,000 lbs.; total, 170,000 lbs.; wheel base, rigid, 15 ft. 6 ins.; total, 23 ft. 6 ins.; with tender, 56 ft.; heating surface, fire-box, 176 sq. ft.; tubes, 2,259 sq. ft.; total, 2,435 sq. ft.; driving wheels, 57 ins. diameter; centers, main, cast steel, others, cast iron; diameter and length of driving journals, 9 and 12 ins.; diameter of cylinders, 21 ins.; stroke, 26 ins.; type of boiler, extended wagon top; working pressure, 200 lbs.; number of tubes, 310; diameter, 2 ins.; length, 14 ft.; brakes, Westinghouse; tender, loaded, 140,000 lbs.; hopper tank; capacity, 6,000 gals.; coal capacity, 12 tons; truck, 4-wheel; diameter of wheel, 33 ins.; wheel, cast iron chilled tread; diameter and length of journal, 5½ and 10 ins.; brake beams, Simplex.

The Temiskaming and Northern Ontario Ry. has ordered from the Canadian Locomotive Co., Kingston, Ont., six 10-wheel locomotives with the following general specifications: Gauge, 4 ft. 10½ ins.; weight in working order on drivers, 112,000 lbs.; total weight, 144,000 lbs.; wheel base of engine, rigid, 13 ft. 6 ins.; total, 23 ft. 8 ins.; diameter of driving wheels, 56 ins.; driving wheel centers, cast steel; diameter and length of driving journals, 8½ and 10 ins.; diameter of cylinders, 19 ins.; stroke, 24 ins.; type of boiler, radial stay; working pressure, 200 lbs.; number of tubes, 239; diameter of tubes, 2 ins.; injectors, locomotive type; brakes, Westinghouse; weight of tender, loaded, 120,000 lbs.; tank capacity, 500 gals.; hopper tank; coal capacity, 10 tons; truck, 4-wheel; wheels steel tired, cast iron centers; diameter of wheels, 33 ins.; diameter and length of journal, 5 and 9 ins.; brake beams, Simplex.

In an interview at Montreal, Aug. 4, upon his return from the Pacific coast, D. McNicoll, Vice-President C.P.R., said: "With business growing as it is in this country cars are always short; but I do not think there will be any particular difficulty in handling the western harvest, as we have very greatly increased our rolling stock since last year. At the Angus shops we are turning out 28 freight cars a day. This year there will be 6,000 new cars available for use when the season for movement of crops arrives. The company has spent something like $10,000,000 in rolling stock for the movement of passengers and freight. By the fall we should have 200 new locomotives in use. That includes 70 which will have been built at our own shops, where we are building a new locomotive every five days, in addition to repairs that are always in progress. Two hundred locomotives per year we are now adding to the system. I do not think that record is bad."

The C.P.R. is having built at its Angus, Montreal, shops, a single track snowplough for its eastern lines, and a double track snowplough, the specifications for which provide as follows: Length, inside, 23 ft. 7¾ in.; length over frame, 35 ft. 1 in.; length over all, 38 ft. 8¼ in.; width, inside, 6 ft. 8 in.; body and underframe, wood; axles, M.C.B., 4¼ by 8 in.; body and truck bolsters, wood; center bearings, cast iron; brake shoes, cast iron; doors, side; draft rigging, push bar at front, draw casting at rear; brakes, Westinghouse air with hand arrangement applied to rear truck only; journal bearings and boxes, M.C.B., 4¼ by 8 in.; roof, double board; side bearings, flat; trucks, rear, swing motion with helical swings; trucks, front, rigid with no springs; wheels, rear truck, cast iron, 33 in. diameter; wheels, front, truck steel tired, 33½ in. diameter; wings on single track plough, one on each side 6 ft. wide operated by hand or air, and on double track plough, one wing 6 ft. wide, and one 10 ft. wide, operated by hand or air; points, drops, operated by hand or air; cupola, C.P.R. standard; centers of trucks, 22 ft. 2 in.; headlight, C.P.R. standard locomotive.

Following are the general specifications for the 20 consolidation locomotives which the Canadian Northern Ry. has ordered from the Locomotive and Machine Co. of Montreal, for delivery commencing in Dec.:

Cylinder.—Type, simple piston; diameter, 21 in.; stroke, 26 in.

Tractive Power.—34,200 lbs.

Wheel Base.—Driving and rigid, 15 ft. 6 in.; total, engine, 23 ft. 9 in.,; total, engine and tender, 53 ft. 4 in.

Weight.—In working order, 173,000 lbs.; on drivers, 154,000 lbs.; total engine and tender, in working order, 313,000 lbs.

Heating Surface.—Tubes, 2,259 sq. ft.; firebox, 176 sq. ft.; total, 2,435 sq. ft.; grate area, 32.7 ft.

Axles.—Main and other driving journals, 9 by 12 in.; engine truck journals, 5½ by 10 in.; tender truck journals, 5½ by 10 in.

Boiler.—Type, extension wagon top; outside diameter first ring, 66⅜ in.; working pressure, 200 lbs.

Firebox.—Type, narrow; length, 114⅛ in.; width, 41¼ in.; thickness of crown, ⅜ in.; tube, ½ in.; sides, ⅜ in.; back, ⅜ in.; waterspace, front, 4 in.; sides, 3½ in.; back, 3½ in.; crown staying, radial.

Tubes.—Number, 310; diameter, 2 in.; length, 14 ft.; gauge, 11.

Brakes.—Driver, Westinghouse American; tender, Westinghouse; air signal, Westinghouse.

Engine Truck.—Two wheel with swing center bearing.

Grate.—Style, rocking.

Tender.—Frame, 10 in. channels and 18 in. I beams.

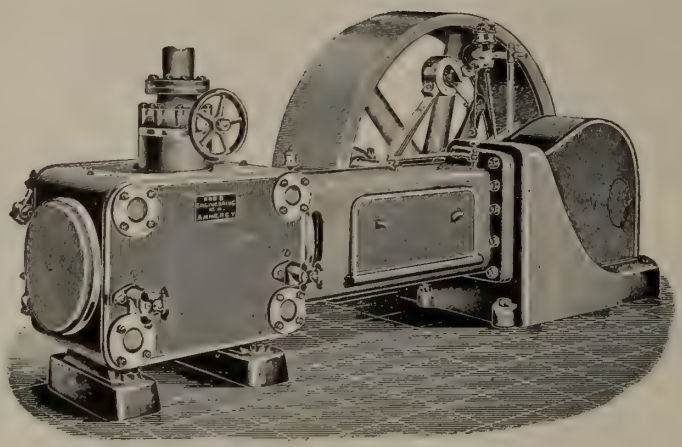
Tank.—Style U-shape with gravity slides; capacity, 6,000 imperial gallons, water and 12 tons coal.

Valves.—Type, piston, 12 in. diameter; travel, 6 in.; steam lap, 1 in.; setting, ⅛ in. lead in full gear.

Wheels.—Driving, 57 in. outside tire; 50 in. centers; material, cast steel; engine truck, 30 in., cast steel centers, steel tired; tender, 33 in., cast iron chilled tread.

Five associations of commercial travellers in Canada have inaugurated a movement to secure from railway companies the same travelling privileges for their wives as they receive themselves.

ROBB POWER PLANTS



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MEDIUM SPEED HORIZONTAL ENGINES
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TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Golden-Anderson Valve Specialty Co., Pittsburg Pa., has issued catalogue 9 of its steam and water specialties.

The Dominion Car and Foundry Co. proposes to add a cast steel plant, and a malleable iron plant, as well as to extend its steel car shops at Blue Bonnets, near Montreal. The total cost of the additions to the plant is estimated at $1,000,000.

The Falls Hollow Staybolt Co., Cuyahoga Falls, Ohio, is erecting a mill three times the capacity of its present plant, to take care of its increasing trade for Falls hollow and solid staybolt iron, from the railways in the U.S., Canada, Mexico and other countries.

Hayes Track Appliance Co., Geneva, N.Y., has issued its catalogue 46 describing a number of new styles of derails, including models C and CX. The company advises us that there are now more than 17,000 of its derails in use on more than 260 railways.

E. H. Keating, of Toronto, and W. H. Breithaupt, of Berlin, Ont., civil engineers, have formed a partnership and opened offices at Aberdeen Chambers, Victoria Street, Toronto, to take up all questions of railway and municipal work, power developments, bridges, foundations, builders, etc.

Eugene Dietzgen Co. of Ontario, has been incorporated under the Ontario Companies' Act, with a capital of $30,000 and offices at Toronto, to manufacture, import, export, sell and deal in drawing instruments, supplies and scientific instruments. The provisional directors are: R. C. Brandt, W. K. Hoyer, J. S. Brewes, A. Anderson, and A. Ferguson, Toronto.

The Canadian General Electric Co. is erecting an office building at the corner of King and Simcoe Streets, Toronto, at an approximate cost of $100,000. It will be 186 by 65 ft., having 6 floors and basement. It is intended to provide a private road at the rear, thus giving abundance of air and light. Stone, brick, steel, and reinforced concrete will be used in the construction.

The American Locomotive Co. has just issued the ninth of its series of pamphlets covering the standard types of locomotives. This number is devoted to 6-wheel switching locomotives and contains half-tone illustrations and the principal dimensions of 26 different designs of this type. The designs illustrated range in weights from 102,000 to 176,500 lbs., and are adapted to a variety of service conditions.

J. J. Gartshore, Toronto, reports the following recent sales: About 1,100 tons relaying rails to Chatham, Wallaceburg & Lake Erie Ry., for extension of line to Lake Erie. 200 tons to the City of Winnipeg for power development work, 180 tons to Ste. Anne Power Co., Beaupre, Que.; 125 tons to Southwestern Traction Co., St. Thomas, Ont.; one standard gauge locomotive and dump cars to Colonial Portland Cement Co., Wiarton, Ont.; one standard gauge locomotive to Mickle, Dyment & Son, Gravenhurst, Ont.; one narrow gauge locomotive to Canada Paper Co., Windsor Mills, Que.

The Chicago Pneumatic Tool Co. has issued two new catalogues, nos. 23 and 24. No. 23 is devoted exclusively to Franklin air compressors. It contains descriptive matter and information relating to air compressors, and is embellished with half-tone engravings of the machines and parts. No. 24 covers elaborately the company's line of pneumatic tools and appliances, including Boyer and Keller hammers, Little Giant drills, sand rammers and hoists. Both books are printed in colors, conveniently indexed and strongly bound, thus making them books of reference as well as catalogues. Copies will be forwarded upon request by Chicago Pneumatic Tool Co., Fisher Building, Chicago, or 95 Liberty St., New York.

C.P.R. Betterments, Construction, Etc.

Sir T. G. Shaughnessy, President, has just completed an inspection of the company's lines in Ontario, with special reference to the new lines now nearing completion. On returning to Montreal Aug. 2, he said the lines were in excellent condition, and he was well satisfied with the new additions which were under construction. The Guelph and Goderich Ry. was nearly completed; the Toronto-Sudbury line had been completed as far as the center of Muskoka, and substantial progress had been made on the Georgian Bay and Seaboard Ry. from Victoria Harbor, on the Georgian Bay, to Peterboro, Ont. This line involves a good deal of difficult engineering and structural work, and is not expected to be completed in 1908, but it will be in operation in 1909. The question of a new port for the company's trans-Atlantic steamship was being dealt with by D. McNicoll, Vice-President, and had not yet come before him officially.

D. McNicoll, who has recently made a trip of inspection over the company's lines in Western Canada, said on his return to Montreal, the west was growing at a rate far in excess of all expectations. To meet this the C.P.R. had laid down a programme of extensions a good deal beyond the possibility of conclusion this year, so that at present little was being done in the way of starting new branches, although, naturally, plans were under way for lines to meet the demands of the growth of the country. The new line to the Nicola Valley was already nearly completed, while engineers were on the ground with a view to a rapid extension beyond Midway to the coast. With regard to the proposed line into the Kootenay country, which was so much desired by the people there, it was a matter largely in the hands of W. Whyte, Second Vice-President, and arrangements had not yet reached a definite enough stage to warrant any announcement which might be construed into a promise. As an example of the effect of even the promise of the construction of a railway had, he might state that since the line to Alberni, B.C., had assumed definite future proportions, a new town was being built at Alberni, and holders were asking as high at $1,100 for 100 ft. lots with a 30 ft. frontage on the main street.

Guelph and Goderich Ry.—Track has been laid on this line to the bank of the Maitland River, Goderich, Ont., and the line was opened for traffic Aug. 26. At Goderich the Maitland River is crossed by a bridge, and a big cement wall has been built on the bank which separates the high level G. and G. Ry. tracks from the low level line of the G.T.R. entering the town.

The C.P.R. and Sarnia.—The C.P.R. Manager of Construction, Toronto, was in Sarnia, Ont., looking over the property of the Sarnia Bay Mill Co. Local reports state that the object in view is the purchase of the property as the site of terminals for a new line which the C.P.R. intends to construct in the near future. The new line, it is stated, will start from London, and another line will ultimately be constructed from Stratford.

Central Division Stations.—The alterations at Fort William station are reported to be well under way, and new station buildings are reported to be nearly completed at Winkworth, Molson and Beausejours.

Moreau St. Freight Shed.—A permit has been granted for the erection of a new brick freight shed, 224 ft. in length, by 320 ft. in depth, on Moreau st., near Ontario st., Montreal. Shearer, Brown and Wills are the contractors.

Molson Cut-off.—The new line from Winnipeg easterly to Molson, Man., 36 miles, has been completed, and will be opened for traffic as soon as it has been passed by the Government inspectors. This line will enable trains to be run into Winnipeg from the east without going round by East Selkirk as at present.

Winnipeg-Brandon Second Track.—We have been officially advised that while a second track will undoubtedly be constructed ultimately between Winnipeg and Brandon, Man., nothing has as yet been done.

Manitoba and Northwestern Ry.—Rapid progress is reported to have been made with the construction of this line from the present terminal at Sheho, to Saskatoon, Sask. The company's tracklaying outfit was reported to have reached Lanigan, the junction with the Pheasant Hills branch, Aug. 2, and it was expected that track will be laid into Saskatoon by Sept. 1.

Lethbridge to Strathmore.—Press reports state that the construction of a branch line is under consideration from Lethbridge, northerly to the main line near Strathmore, Alta., about 100 miles. Such a branch would feed a large area of the 3,000,000 acre tract east of Calgary, which is being opened up for settlement by the company's irrigation works on the Bow River.

Moose Jaw Northerly.—A contract has been let to J. D. McArthur for the grading of this line from mileage 50 to mileage 123. At present trains are being operated from Moose Jaw for 14 miles, to Tuxford, and the grading is practically completed from mileage 14 to mileage 50. The additional 73 miles now contracted for will carry the branch 15 miles beyond the South Saskatchewan River. The company will let a separate contract for the erection of the bridge across the river. The river will be crossed in tp. 29, r. 8, w. 3, about 25 miles from the center of the Goose Lake district, the people of which district have been asking both the C.P.R. and the Canadian Northern Ry. to extend lines to that point. This line will ultimately effect a junction with the Lacombe branch of the Calgary and Edmonton Ry.

Crow's Nest Pass Line.—In connection with the reported reconstruction of the Crow's Nest Pass line between Pincher Creek and Crow's Nest Pass, we are advised that the work contemplated is in the nature of grade revision. The surveys have not yet been completed, and it has not yet been decided when the construction work will be gone on with

Saskatoon Westerly.—F. J. George, of the C.P.R. Western Construction Staff, recently completed a trip of inspection over the line under construction westerly from Saskatoon, to meet the Wetaskiwin branch of the Calgary and Edmonton Ry. He states that: "From Asquith, to which point from Saskatoon the line is open, there are 110 miles of what is practically completed grade stretching westward. Contractor McArthur has gangs finishing up at points along this grade and within three weeks

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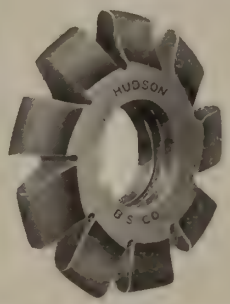

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the long strip will be entirely ready for steel. As it is the grades are so far advanced that the steel men could not overtake them. West of 110 mile ridge being finished, there remains 109 to be done before Battle River is reached. Scattered along this big gap are many gangs of men and teams, and the grade at the rate of a mile a day is being built. The work is much easier than through the Eagle Hills. There is but one reason to prevent proceeding with the 110 miles of steel laying, and that is that they have not the steel. There is scarcely enough for a mile at present at Asquith, but the supplies of ties on hand is almost enough to land them at the other end of the grade. As soon as it is possible to get the steel in he believes that the work of laying it will be resumed from Asquith. In the meantime the big steam shovel brought in by the construction foreman, McTaggart, will be put to work building the approach to the C.P.R. bridge at Saskatoon."

Belly River Bridge.—A contract has been let to John Gunn & Sons, Winnipeg, Man., for the construction of the abutments and the concrete substructure of the new bridge over the Belly River at Lethbridge, Alta. The concrete piling to be used in the foundation work will be supplied under a separate contract.

Revelstoke Bridge.—The new bridge which is being constructed over the Columbia River at Revelstoke, B.C., replaces a wooden structure approximately 1,070 ft. long, consisting of three 150 ft. deck, one 150 ft. through, one 100 ft. and one 120 ft. deck Howe truss spans resting on rock-filled cribs, and 250 ft. of trestle approaches. The new structure will be of steel on concrete piers and abutments. There will be four 150 ft. deck and one 150 through truss spans, two 100 ft. deck plate girder spans, and two 40 ft. deck plate girder spans. The main piers are being built on the present sites of the crib piers, and are being constructed by the C.P.R. staff. The steel truss spans are being supplied by the Canada Foundry Co., Toronto, and the plate girder spans are also being manufactured in Canada. The company's staff will erect the superstructure.

Pheasant Hills Branch.—The extension of the Pheasant Hills branch from Strassburg, westerly for 40 miles, we are advised is nearly completed. The British Columbia General Contract Co. had the contract. Their line effects a junction with the Manitoba and Northwestern Ry. at Lanigan, Sask. A survey party is in the field working between Regina and Saskatoon, with a view of laying out a line from Regina to some points on the Pheasant Hills branch.

Vancouver Island Betterments.—A Vancouver, B.C., dispatch states that R. Marpole, Executive Assistant, has made an announcement that a start will be immediately made on the construction of the projected extension of the Esquimalt and Nanaimo Ry. from Nanaimo to Alberni.

The Canadian Northern Townsite Co. has been incorporated under the Dominion Companies' Act, with a capital of $250,000 and offices at Toronto, for the purpose of acquiring lands, wharves, docks, dockyards, slip, warehouses, sheds, elevators, etc.; to acquire lands for townsites, and to lay out and improve the same; to charter or otherwise acquire steam and other vessels, and to operate the same in and beyond Canada; and for other purposes incidental thereto. The provisional directors are: G. G. Ruel, G. F. Macdonnell, A. J. Mitchell, F. C. Annesley, R. T. Ormsby, all connected with the offices of Mackenzie, Mann & Co., Limited, Toronto.

Quebec and Lake St. John Railway.

The Gosford branch, extending from Lorette to Clark Settlement in the Riviere aux Pins Valley, 5.75 miles, was opened for traffic Aug. 1. The locomotive drawing the train which carried the official party over the branch was the E. Beaudette engine no. 1, which was the first to run on the old Gosford wooden railway in 1872. In the course of his speech at the public dinner, with which the event was celebrated, J. G. Scott, General Manager, said: "We are met to-day for the purpose of inaugurating a work which is the completion of a work begun in 1870. I refer to the Gosford wooden railway, built by Quebec capital raised with much difficulty by Sir Henri de Lotbiniere and M. W. Baby, with the aid of J. B. Renaud, J. Ross, Hon. P. Garneau, H. Fry and others who have since gone to their rest. As happened since with regard to the main line, the promoters of 1870 had to rely upon the energy and the financial pluck of a U.S. citizen to build the road as contractor and they secured the services of J. B. Hulbert in the same way as we 13 years later secured the services of another U.S. citizen, H. J. Beemer, to build the main line. Mr. Hulbert was ably seconded by local engineers—the late C. A. Scott, J. Sullivan, H. O'Sullivan, and the late Mr. Stocking, and the wooden railway was built. It was not a success, but it caused the construction of a much larger public work, namely, the Lake St. John Ry., which has been of untold benefit to the city of Quebec. When the Lake St. John road was undertaken it was found that the Gosford end of the road was unsuitable for a through line, and the Gosford reverted to its primeval solitude. But the wealth of timber contained in the township of Gosford, and the large population isolated in the valley of the Riviere aux Pins settlements known as St. Gabriel West, commanded attention, and the result is the construction of a branch line from Valcartier station to Gosford, the first section of which we are inaugurating to-day. Not only will this branch be valuable in exploiting the splendid hardwood lands of the township of Gosford, which will furnish an abundant supply of square birch and other timber for export at Quebec, and the best quality of fuel for the city of Quebec and for the rich parishes of Lorette, Charlesbourg and Beauport which are running short of fuel, but it will also remove from their isolation the hardy farmers of St. Gabriel West, several hundred families in number, who now cultivate the fertile lands of the Riviere aux Pins Valley, separated from civilization by a high range of mountains. For the farmers living on the north side of the Jacques Cartier River there is no bridge to cross that river for a distance of 20 miles from Valcartier to Pont Rouge. This is a terrible inconvenience, but it is going to be remedied by means of the very work we are inaugurating to-day, because one of the conditions upon which the Provincial Government has subsidized this branch is that the railway company shall construct a carriageway alongside of its bridge over the Jacques Cartier, and I have no doubt the Dominion Government will make the same stipulation when it grants its subsidy. But this section of this Gosfard branch which we are inaugurating to-day is not all that has to be done. This branch must eventually be extended in one direction to the end of the settlements in the Riviere aux Pins Valley, and in the other to the first or second range of the township of Gosford in the direction of Lake Sept Isles, through lands capable of supplying enormous quantities of hardwood timber. "A capital of $100,000 raised by Sir Henri de Lotbiniere and his associates for the Gosford Ry. has resulted in an expenditure of $10,000,000, and in the commercial salvation of Quebec through the control of a great back country and of the lumber trade of the two greatest rivers in the Province—the Saguenay and the St. Maurice. If Quebec people will combine again even in a small way, as before, it will not be long before we will be calling out 'all aboard for James Bay,' and Quebec will then have secured another back country larger and richer than what we have already secured." (May, pg. 327).

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-06, from July 1, 1906:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$ 603,800	$ 397,900	$ 205,900	$ 63,400+
Aug..	594,900	402,800	192,100	80,400+
Sept..	624,400	417,800	206,600	96,400+
Oct...	815,100	490,900	324,200	66,000+
Nov..	741,700	481,300	260,400	35,300+
Dec..	536,200	407,800	128,400	13,800−
Jan...	351,400	410,300	58,900−	158,200-
Feb..	333,200	363,600	30,400−	113,900−
Mar.	488,800	394,800	94,000	23,400−
April	569,900	465,200	104,700	91,000−
May.	870,600	512,500	358,100	145,600+
June.	963,100	630,200	332,900	119,500+
	$7,493,100	$5,375,100	$2,118,000	$ 206,300+

Approximate earnings for July $939,500 against $603,800 for July, 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1905-6, from July 1, 1906:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$5,967,967.82	$3,596,156.74	$2,371,811.08	$734,033.42+
Aug.	6 170,452.27	3,707,873.07	2,462,579.20	670,933.29+
Sept.	6,152,767.15	3,714,835.52	2,437,931.63	661,921.58+
Oct..	6,946,605.48	4,161,777.97	2,784,827.51	510,756.33+
Nov.	6,234,583.28	3,971,460.34	2,263,122.94	98,188.05−
Dec.	5,992,098.07	3,726,503.73	2,265,594.34	80,988 97−
Jan..	4,205,527.07	3,657,199 46	548,327.61	718,906.41−
Feb..	4,268,206.74	3,646,218.62	621,988.12	583,755.66−
Mar.	6,132,910.76	3,887,174.54	2,245,736.22	401,071.72+
Apl..	6,391,561.39	4,024,635 52	2,366,925.87	24,367.03+
May.	6,937,135.20	4,417,777.19	2,519,358.01	331,695.38+
June.	6,817,712.41	4,402,606.13	2,415,106.28	477,056.52+
	$72,217,527.64	$46,914,218 83	$25,303,308.81	$2,329,996.18+

Approximate earnings for July $6,900,000 against $5,882,000 for July, 1906.

Duluth, South Shore and Atlantic Ry.—Gross earnings for June $314,463.49; net earnings, $88,271.38, against $276,257.35 gross and $89,201.08 net for June, 1906. Net earnings for twelve months ended June 30, $991,020.17 against $1,000,315.64 for same period, 1905-06. Approximate earnings for July, $329,995, against $279,213 for July, 1906.

Mineral Range Ry.—Gross earnings for June $67,470.02, net earnings $14,290.15, against $57,721.90 gross and $9,577.63 net for June, 1906. Net earnings for twelve months ended June 30, $169,796.35 against $163,260.71 for the same period 1905-06. Approximate earnings for July $72,259 against $56,796 for July 1906.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—Gross earnings for June, $1,159,790.34; net earnings $440,774.69, against $1,015,698.30 gross and $425,532.27 net for June, 1906. Net earnings for twelve months ended June 30, $5,458,530.24 against $5,789,902.21 for the same period 1905-06. Approximate earnings for July, $1,102,152 against $998,339 for July, 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

Subject to audit, the accounts for the half-year ended June 30, 1907, show the following results:

Gross receipts		£3,381,200
Working expenses		2,446,500
Net receipts		£ 934,700
Net revenue charges for the half-year, less credits		480.600
Balance		£ 454,100
Deduct Canada Atlantic Ry. deficiency for half-year	£87,800	
Detroit, Grand Haven & Milwaukee Ry. deficiency for the half-year	11,000	98,800
Surplus		£355,300

The above surplus of £355,300 added to the balance of £13,200 from Dec., 1906, makes a total of £368,500, out of which it is proposed to set aside £40,000 to form the nucleus of the pension fund referred to by the President at the last general meeting. The balance of £328,500 will admit of the payment of the dividends for the half-year on the 4% guaranteed stock and 1st and 2nd preference stocks, leaving about £14,600 to be carried forward. It is estimated that the future contributions to the pension fund will amount to about £15,000 a year. The accounts of the G.T. Western Ry. for the year ended June 30, show a surplus sufficient to provide for the interest on the first mortgage bonds and leave a balance of about £18,200.

Approximate earnings for July, $4,001,238, against $3,606,234 for July, 1906.

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Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska Central Rd.—Reports from Seward, Alaska, state that during the current year construction has been extended from mileage 48 to 55 north of Seward, and that work is in progress at various points up to mileage 75. J. B. Cameron, Seward, is engineer of construction. (Aug., p. 561).

Algoma Central and Hudson's Bay Ry.—C. D. Warren, President Lake Superior Corporation; N. W. Rowell, K.C.; T. Gibson, of Toronto, and W. H. Hearst, of Sault Ste. Marie, Ont., waited on the Ontario Minister of Public Works, Aug. 9, in connection with the company's plans for the extension of its lines. Hon. F. Cochrane promised to give full consideration to the proposals. (July, p. 479).

American Midland Ry., Colorado, Texas and Mexico Ry.—The promoters of a north and south trunk railway from the International boundary to the Gulf of Mexico and beyond are again to the fore. Two new charters have been filed in Oklahoma for the construction of such a line, the northern terminal of one being at Winnipeg, Man., and of the other at Langdon, N.D., on the Great Northern Ry. branch line from Larimore to Hannah at the International boundary. The Railway Age says: The largest recent project is that of the American Midland Ry. Co., capital stock started at $60,000,000, which desires to build 2,100 miles of railways, consisting of a main line from Langdon, in the north-eastern corner of North Dakota, southward to the Gulf at Galveston, with two long branches. The headquarters are located in that financial center, Guthrie, Okla. This enterprise is nearly as ambitious as that of the U.S. Central Ry. Co., recently incorporated in South Dakota, capital $50,000,000, which is to construct a railway from Portland, Me., to San Francisco, Cal., at an estimated outlay of $500,000,000. Another company proposes to build a railway to the Gulf or farther, the new Oklahoma-chartered Colorado, Texas and Mexico, which contemplates 2,500 miles of road from Winnipeg, Man., to Arkansas Pass and Corpus Christi, Tex., with branches to Galveston and Eagle Pass and into old Mexico. This claims more mileage than the American Midland, chartered recently in Oklahoma also, to build from Langdon, N.D., to Galveston, an asserted distance of 2,100 miles, and still further surpasses the Yankton Southern, which aims only at present to build from the South Dakota border to Galveston, a distance conservatively stated as 1,000 miles. The first-named company avoids any attempt to verify its mileage by leaving its main line projected indefinitely into old Mexico, but the American Midland confuses the investigator by declaring that its line, for which the needed $60,000,000 is said to be in hand, 'will be 2,100 miles long, straight as the crow flies, from Langdon to Galveston.'" But a straight line between these termini scales less than 1,400 miles, so that if the route is 2,100 miles long we must choose between the crow flying in a curiously meandering course, which adds 50% to the direct mileage, or that the enthusiastic bird sails on 700 miles beyond Galveston, nearly across the Gulf, before it alights. Either the American Midland proposes an uncommonly crooked line or a combined midland and midwater line, or it has watered its mileage, as well as its stock, for public consumption. There is a mistake somewhere and investors should wait for more light."

Central Ontario Ry.—Tenders are under consideration for the construction of a concrete station building and platforms at Maynooth on the Whitney extension of this line. (Aug., p. 561.)

Duluth, Rainy River and Winnipeg Ry.—Track was laid on this line to the southern shore of the Rainy River, opposite Fort Frances, Ont., Aug. 11, and ballasting was immediately gone on with. It was expected to have a freight and passenger train service in operation by Aug. 31. The line starts at Rainy Jct., the terminal of the Duluth, Missabie and Northern Ry., and has been in operation for some time to Pelican, 44 miles, and was projected by the Virginia and Rainy Lake Co., for the development of its lumber business. At Rainy River a bridge is being constructed jointly with the Canadian Northern Ry., for the purpose of enabling through trains to be run between Duluth on the one hand, and Winnipeg and Port Arthur on the other. Reports from Fort Frances state that it was expected to have the pile and pier work for the bridge completed by Aug. 15. Much of the steel for the superstructure had been delivered. The Canadian Northern Ry. erected the piers and pile work, and the steel work is being erected by the D.R.R. and W. Ry. The bridge will be maintained by the two companies. It is expected to have the bridge completed early in Oct.

As soon as the line from Virginia to Rainy River is fully completed and in operation, the company proposes to start the construction of a line from Virginia southerly to Duluth, so as to give it a line to that city independent of the Duluth, Missabie and Northern Ry. (Aug., pg. 561).

Edmonton and Slave Lake Ry.—There has been deposited with the Secretary of State at Ottawa, a mortgage dated July 1, from the E. and S.L. Ry. to the National Trust Co., Toronto, securing an issue of the first mortgage bonds to the extent of $20,000 a mile on that portion of the company's projected railway between Edmonton and Athabasca Landing, Alta., about 100 miles.

Halifax and South-Western Ry.—C. W. Spencer, General Manager Mackenzie, Mann & Co.'s Eastern Lines, recently completed a trip of inspection over the H. and S.W. Ry., and says that with the exception of the steel bridge over the Mersey River, near Liverpool, which is under construction, the whole line is solid and permanent. All the temporary trestles and bridges have been done away with, and the whole line brought up to the standard for running fast trains. (Aug., pg. 561).

Intercolonial Ry.—Rapid progress is reported to have been made to date with the construction of the second track between Moncton and Painsec Jct., N.B. Local labor is being almost exclusively employed by the contractors, the McManus Co.

Tenders are under consideration for the construction of a flour shed at St. John, N.B. (Aug., pg. 561).

International Ry. of New Brunswick.—T. Malcolm, the contractor for the construction of this railway from Campbellton to the St. John River, at St. Leonard's, N.B., is quoted as saying that it was expected to have the last rails laid by Aug. or Sept., 1908. At present about 700 men are at work upon the line, and grading is in progress from both sides. The grading from the St. Leonard's end has reached a point about twelve miles out. (Aug., pg. 561).

Kingston, Smith's Falls and Ottawa Ry.—Although the project to construct a line of railway between Kingston and Ottawa is being carried out by an independent company with the above title, it is really a G.T.R. work.

Klondike Mines Ry.—R. Lowther, of Lowther & Latta, London, Eng., which firm has charge of the financial affairs of the company in England, is in Dawson, Yukon, looking into the question of the extension of the line. At a recent meeting of the Dawson Board of Trade, he stated that his firm would be willing to undertake the task of constructing a line southerly to existing railway lines, provided sufficient local and Government support and encouragement was given. A committee of the Board was appointed to gather all possible information as to probable trade, etc. (Jan., pg. 3).

Macleod, Cardston and Montana Ry.—Application will be made next session of the Dominion Parliament for an act extending the time, authorized by the Act of 1903, and amending acts, for the commencement and completion of this projected railway. (Feb., pg. 89).

Magdalen River Ry.—Dr. Lemieux, M.L.A. for Gaspe, is quoted as saying at Quebec recently that the construction had been commenced and was progressing favorably upon this line, which is to connect Cap a la Ours with the main line of the Atlantic, Quebec and Western Ry. (Aug., pg. 563).

Maritime Coal, Ry. and Power Co.—The branch line from Fundy Mine on the main line down to the new slope which has been opened by the company, a distance of 1.25 miles, is under construction, and considerable progress has been made. The contractors are Wheaton Bros.

The company has completed the installation of a power plant at Chignecto, N.S., which started delivering electric energy at Amherst, July 31. The power house is situated near the mouth of the colliery, and the fuel used for the generation of the power is the screenings and waste coal formerly of practically no value. The plant consists of a Robb cross-compound, vertical, enclosed, self-oiling engine of 800 h.p., and four return tubular high pressure boilers supplied by the Robb Engineering Works, Amherst. The engine is directly connected to a Canadian Westinghouse alternating generator of 100 k.w. capacity. The power line is 6½ miles long to the transforming station at Amherst, and is carried across the Nappan River and the Intercolonial Ry. by a cable. The company has installed a telephone line along its power line. One of the principal users of the power in Amherst is Rhodes, Curry & Co. Ltd. (Aug., pg. 563).

Matane and Gaspe Ry.—At the annual meeting of shareholders at Riviere du Loup, Que., Aug. 1, it was decided to make a call of 10% upon the capital stock, and to authorize the directors to call for tenders for the construction of the first section of the line. Following are the officers and directors for the current year: President, Hon. P. A. Choquette; Vice-President, A. Fortin; Secretary, R. T. Dubord; other directors: C. A. Gauvreau, J. G. Scott, D. Caron, J. F. Begin, Dr. Ross, M.P., and Rev. A. Soucy. (Jan., pg. 3.)

Minnesota and International Ry.—The section of the line from Big Falls to Little Forks, Minn., 35 miles, has been opened for traffic, and a regular service of trains is being operated under the supervision of the Northern Pacific Ry. Construction Department. Tracklaying and grading is in progress between Little Forks and the Rainy River, opposite Fort Frances, Ont., and it is expected to have the steel laid to that point early in Sept. The line is being constructed under the charter of the Big Falls and International Ry. (Aug., pg. 563).

New Brunswick Coal and Ry. Co.—The repairs to the roadbed and bridges upon the old Central Ry., which has been absorbed by the N.B.C. and Ry. Co., have been practically completed by the Provincial Commission which has the work in hand. As soon as the

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fill at Cumberland Bay is completed the work of ballasting the reconstructed line will be gone on with.

By an act passed last session of the New Brunswick Legislature, the Government (operating the line through a commission) is authorized to grant unrequired portions of the right of way for the purpose of the erection thereon of houses for the occupation of miners engaged in the collieries along the line. (May, pg. 325).

New Brunswick Southern Ry.—We are advised that new ties are being put in and the line is being reballasted, the work being in charge of J. Beckwith, heretofore of the C.P.R. engineering staff. (Aug., pg. 565).

Ottawa Union Station.—On his return to Ottawa, after his recent trip to Europe, Sir W. Laurier stated that one of the first things to engage his attention would be the pushing forward of the project of the new station and hotel which he was disappointed to find had been delayed during his absence. Subsequently the Premier had consultations with W. Wainwright, Fourth Vice-President G.T.R., and D'Arcy Scott, Mayor of Ottawa, in reference to the position of the plans. On Aug. 9, the G.T.R., which company has the duty imposed upon it of the erection of the new station, submitted plans for the same to the Department of Railways for approval. The plans which had been previously submitted have been withdrawn. The site of the new station is to be adjoining Sapper's Bridge; and the plans provide for a terminal station with accommodation not only for the G.T.R., but for the C.P.R., and any other system desiring to utilize it. The central portion of the building will be ten storeys in height, and will be laid out as an office building for the various railway lines, and for general use. The question of the erection of an hotel is in abeyance, but it is expected that some steps will be taken by the G.T.R. towards building one at an early date. (Aug., pg. 577).

Quebec and New Brunswick Ry.—Application will be made next session of the Dominion Parliament for an act reviving and continuing the act of incorporation of this company, and amending acts. It is also desired to have the company's powers amended by giving power to connect with the G. T. Pacific Ry. in the St. Francis River Valley, Quebec; and to have declared legal all proceedings purporting to have been taken in virtue of the provisions of the act of incorporation. The company has power to construct a railway from Quebec to Edmundston, N.B., and some years ago did a little grading at Edmundston.

Sydney and Louisburg Ry.—Surveys are being made for the construction of a line from near Glace Bay to Lingan, N.S. (April, pg. 245).

Temiskaming and Northern Ontario Ry.—The Chairman of the Commission, who has recently made a trip over the line, reports that good progress is being made with the work. Some delay is being occasioned by delay in getting in the steel for the bridge superstructures. Track was reported laid to mileage 208 north of North Bay, Ont. (July, pg. 481).

The Atlantic, Quebec and Western Ry. has been completed from New Carlisle, the terminus of the Atlantic and Lake Superior Ry. which has lately been acquired by this company, to Port Daniel, Que., 23 miles. Active construction operations are in progress between Port Daniel and Gaspe Basin, 83 miles. At L'Anse au Gascon 100 men and a number of teams are at work, and active preparations are being made for starting grading at Grand River, Cape Cove and Gaspe Basin. At the Port Daniel end a tunnel about 400 ft. long will be cut through Hell's Cape. It is expected that by the spring of 1908 construction on the whole of the 83 miles from Port Daniel to Gaspe Basin will be well advanced. (Aug., pg. 561).

Vancouver, Victoria and Eastern Ry. and Navigation Co.—Track has been laid this season from Chapaka, B.C., on the International boundary, to the Similkameen River, and from the river to Keremeos, 12 miles, and grading operations are in progress from Keremeos to Princeton, 45 miles. It is expected to have this part of the work completed this season. The company is also constructing come short branches to mines at Phœnix, B.C. (April, pg. 245).

Winnipeg City Power Line.—The Winnipeg Board of Control has recommended the acceptance of the tender of E. F. Kendal, Kenora, Ont., for 4,000 ties for the Point Du Bois-Lac Du Bonnet Tramway, at 30c. each; and that of J. J. Gartshore, Toronto, for 200 tons of 56-lb. rails, at $39.25 a ton f.o.b. at Lac Du Bonnet.

The city council is considering tenders for the construction of a wooden Howe truss bridge, of 10 spans of 80 ft. each and one draw span of 160 ft., including piers and cribs, crossing the Winnipeg River at Lac du Bonnet narrows. (Aug., pg. 565).

Canadian Northern Ry. Construction, Etc.

Canadian Northern Quebec Ry.—Tracklaying is reported to have commenced on the cut-off from near Garneau Junction, into Quebec. The work is being carried on from Garneau Junction, and is expected to be completed this year. The cut-off is about 80 miles long, the contractors being O'Brien and Mullarkey. The new line from St. Jerome, to connect the old Great Northern Ry. of Canada with the old Montreal and Gatineau Colonization Ry., at St. Sauveur, Que., about 15 miles, has been completed and it was expected that it would be opened for traffic Aug. 19. The proposed line from Montreal to St. Jerome is expected to be constructed during 1908.

Canadian Northern Ontario Ry.—C. W. Spencer, General Manager, is quoted as saying that trains will be running on the line between Hawkesbury and Ottawa, Ont., this fall. Several miles of track have already been made. This line is an extension easterly of the old Great Northern Ry. of Canada, now part of the Canadian Northern Quebec Ry.

J. G. G. Kerry, C.E., Montreal, has been appointed by the Dominion Government to make a report as to the best route for the Ottawa-Toronto line, for which the company has filed plans. These plans have been objected to by certain interests, and the Department of Railways decided, before finally passing them, to have an independent survey made. The section of country through which the location is objected to, lies between Smith's Falls and Lanark. The G.T.R. is interested in the Kingston, Smith's Falls and Ottawa Ry., which passes through the same section of country, and the location of this line will also be decided upon the report of this special survey.

A deputation from Parry Sound, Ont., waited on Mackenzie, Mann & Co., and the Ontario Government recently to urge the construction of a line from the Canadian Northern Ontario Ry. at Parry Sound, to North Bay, making a connection there with the Temiskaming and Northern Ontario Ry., owned by the Ontario Government.

Canadian Northern Ry. — Considerable progress has been made with the erection of the new buildings at Fort Rouge, Winnipeg. The roundhouse has been almost completed, and the erecting shop has been begun. The building is of brick upon concrete foundations. The main shop will be 163 by 572 ft., with three additions each 31 by 44 ft.

Several conferences have been held between representatives of the C.N.R. and of the G.T. Pacific Ry. respecting the plans for the projected joint terminals at Winnipeg. D. D. Mann stated in Winnipeg, Aug. 8, that as the result of the conferences, several changes had been decided upon in the plans. As soon as these had been made and approved by the companies the C.N.R. would go ahead with the work of construction. The plans include, in addition to the station proper, double-track bridges across the Red and Assiniboine rivers.

As a result of a number of deputations from the Goose Lake district of Saskatchewan, it has been decided to make a start with the line projected from Saskatoon to Calgary, Alta. W. Mackenzie, President, said that 75 miles would be the limit that could be undertaken this year. A right-of-way out of Saskatoon is being arranged for, and the farmers for 52 miles of the route have agreed to grant a free right-of-way for the line. A. K. Mann, it is reported, will have charge of the construction of the branch.

M. H. McLeod, General Manager, recently informed the city of Brandon that the company contemplated putting up a 10-stall roundhouse, to cost about $50,000, a depot costing about $35,000, as well as extensive yards and yard buildings. A site near the present station has been purchased from the Salvation Army. An effort will be made to get as much as possible done this year.

The Saskatchewan Government received a telegram, Aug. 3, from W. Mackenzie, President, C.N.R., stating that the Government's proposition respecting the construction of a joint traffic and railway bridge over the Saskatchewan River at Prince Albert would be accepted, and that the C.N.R. would proceed with its erection at once. It is said that the arrangement provides for the construction of a joint railway and traffic bridge on cement piers with roadway on each side of the railway track to accommodate traffic. The company is to commence construction of the bridge at once, and have it completed by Nov. 1, 1908. It is also said that the arrangements include an immediate extension of the railway from Prince Albert westward through Shelbrook to Battleford.

A Vancouver press report states that the C.N.R. has asked the British Columbia Government to guarantee interest upon an issue of bonds for the construction of a line from the eastern boundary of the province to the Pacific Coast. The company has had surveys made for a line through the Yellowhead Pass, and it is stated that if the B.C. Government views the proposition with favor, survey parties will be put in the field to complete the surveys to the coast.

J. Ogilvie, Inspector of Rolling Stock, and General Equipment for the Railway Commissioners, has returned to Ottawa, after completing a trip of inspection over the railways in the Maritime Provinces.

Press reports state that the G.T.R. is to adopt a scheme whereby conductors will be relieved of the work of collecting tickets and fares in their trains. It is stated that auditors will travel on the trains to do this work.

In response to a request by the Morinville mine owners, the Dominion Government is to hold an inquiry at Edmonton, Alta., when the mine owners will be heard against the recent order by the Railway Commissioners forbidding the use of lignite coal on railways.

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MAINLY ABOUT PEOPLE.

F. J. McCallum, G.T.R. agent at Midland, Ont., died there July 27.

D. M. Fraser, travelling passenger agent C.P.R., died at his home, Windsor, Ont., July 29, aged 33.

J. B. McDonald, night foreman G.T.R. yards, Allandale, Ont., was run over and killed there, July 29.

Mrs. Graham, wife of Harvey Graham, director of the Nova Scotia Steel Co., died at New Glasgow, N.S., Aug. 5.

C. Whiteway, who died at St. John's, Nfld., recently, was at one time manager of the tramway service at Sydney, N.S.

Donald A. Smith, of the C.P.R. foreign freight office, Montreal, was married in Montreal, Aug. 7, to Miss F. D. Schofield.

Professor E. Brydon Jack, Dalhousie College, N.B., has been appointed Professor of Engineering at the University of Manitoba.

G. A. Mitchell, Assistant General Passenger Agent Northern Pacific Ry., St. Paul, Minn., was visiting his mother at Sackville, N.B., recently.

P. J. Gallagher, formerly roadmaster C.P.R. at Nelson, B.C., is now carrying on a lumber business at Summit Lake, near Nakusp, B.C.

M. Newland, formerly roadmaster C.P.R. at Cranbrook, B.C., is now in charge of steam shovel work as general foreman on the Southern Pacific Lines in Oregon.

J. T. Arundel, who has been appointed Superintendent C.P.R. at Vancouver, B.C., was entertained at dinner by the C.P.R. officials at Winnipeg, Man., July 25, prior to his leaving that city.

J. T. Webster, foreman of bridges and buildings, Michigan Central Rd., St. Thomas, Ont., was injured as the result of a collision between his gasolene "jigger" and a handcar at Victoria, Ont., Aug. 15.

G. N. McIntosh, air brake instructor G.T.R., Montreal, was presented with a travelling bag by the officials and employes of the roundhouse at Stratford, Ont., Aug. 12, where he was formerly engaged.

J. P. Ferguson, Galena-Signal Oil Co.'s expert, who has heretofore had his headquarters in Montreal, was married recently to Miss I. F. Beamish, of Pembroke, and is now residing at 22 Rosebury ave., Ottawa, Ont.

The official car of W. K. Thompson, C.P.R. Superintendent, White River, Ont., was damaged by a collision at Port Arthur, Ont., Aug. 16. The occupants, Mr. and Mrs. Thompson and four children, were uninjured.

E. Tiffin, General Traffic Manager Intercolonial Ry., returned to Moncton, N.B., from Great Britain, Aug. 16. It is said that he went for the purpose of arranging for an office and representative for the I.C.R. in London.

Mrs. Olds, wife of George Olds, who for a number of years was General Traffic Manager of the C.P.R., died in Montreal recently. Mr. Olds subsequently left Montreal for England, and is expected to return in September.

T. Williams, Superintendent C.P.R., Farnham, Quebec, had one leg broken and the other badly bruised April 12, as the result of the derailment of his motor car, caused by striking a dog near Foster, while on an inspection trip.

D. McQueen, President of the Imperial Packing Co., Woodstock, N.B., died there Aug. 11, aged 57. In early life he was a conductor on the old New Brunswick Ry., and subsequently engaged in business as a railway contractor.

The British Government has authorized the construction of about 400 miles of railway in Northern Nigeria, and has entrusted the general supervision of the work to Lieut.-Col. Sir E. P. Girouard, Governor of the Colony, who was at one time on the C.P.R. engineering staff.

The scholarships at McGill University offered by the G.T.R. to its junior employes, or sons of employes, have been won this year by E. Kingsley, son of the Chief Train Dispatcher at Lindsay, Ont., and P. L. Bolton, an employe at the Point St. Charles shops.

J. J. Wallace, General Freight Agent Intercolonial Ry., who has been granted three months' vacation, commencing Sept. 1, is going to Summerland, B. C., and may possibly decide to remain there. He entered the service of the old European and American Ry. in 1865, and remained with the Intercolonial Ry. when the Government took over the E. and A. Ry., becoming General Freight Agent in 1892.

The Imperial Service Medal has been awarded to the following retired employes of the Intercolonial Ry., for long and meritorious services: T. Amos, trackman; P. Blais, trackman; J. B. Couture, trackman; J. Dumas, track foreman; W. Gillen, porter; A. Henderson, track carpenter; J. Lindsay, track foreman; J. McFasden, conductor; W. Neville, trackman; J. Stewart, engineman; E. White, cleaner.

C. E. Dewey, formerly Division Freight Agent G.T.R., Toronto, who was recently promoted to be Assistant General Freight Agent at Montreal, was presented with a handsome tea set by Toronto and other transportation officials in Toronto, Aug. 19. D. O. Wood, General Western Freight Agent, Allan Steamship Line, presided and W. A. Wilson, General Canadian Freight Agent, New York Central Lines, made the presentation.

Among those who attended the recent Old Boys' celebration at Ottawa, was Robert Whitehead, 78 years of age, of Smith's Falls, Ont., who saw service as a locomotive driver in England and France before coming to Portland, Me., in 1853. He was driver of the first G.T.R. locomotive out of Richmond, Que., and remained with that company until 1876, when he went to one of the lines subsequently amalgamated with the C.P.R.

R. W. Long, who has been appointed Division Freight Agent, G.T.R., Hamilton, Ont., was born at Appin, Ont., Mar. 20, 1873, and entered railway service 1889, his record being: Mar., 1889, to Oct., 1896, operator and clerk in Commercial Agent's and local freight agent's offices, G.T.R., Buffalo, N.Y.; Oct., 1896, to Sept., 1901, contracting freight agent, G.T.R., Buffalo; Sept., 1901, to May, 1904, commercial agent, G.T.R., Buffalo; June, 1904, to July, 1907, Division Freight Agent, G.T.R., Stratford, Ont.

F. H. Sproule, who has been appointed contracting freight agent, C.P.R., at Saskatoon, Sask., was born at Napanee, Ont., June 2, 1868. He entered C.P.R. service as telegraph operator at Selkirk, Man., Aug., 1886, and filled the position of freight and ticket agent at various points on the Western Division since that date. During the grain season of 1905 and 1906 he was employed as travelling grain agent on district 3, Central Division, and was appointed contracting freight agent at Saskatoon, June, 1907.

D. G. Ross, who died in the General Hospital, Vernon, B.C., July 24, was for a number of years in the C.P.R. service, which he left to become Superintendent of the Manitoba and Northwestern Ry. On this line being absorbed by the C.P.R., he was appointed Superintendent at Fort William, Ont., and subsequently was Superintendent on the company's Crow's Nest Pass line at Nelson, B.C., returning to Fort William for a short time in 1902. In the fall of that year his health gave way and he was given leave of absence, but was never able to return to the company's service. After spending some time in California, he went to British Columbia in 1906, and became manager of the Summerland Development Co.

G. Grant, who has been appointed Inspecting Engineer of the Transcontinental Railway Commission, was born at Dufftown, Banffshire, Scotland, Jan. 2, 1865, and is a son of the late Peter Grant, a member of Sir Sandford Fleming's staff on the Intercolonial Ry. and the C.P.R. He was educated at Ottawa, and went to the Argentine Republic in 1881 with his uncle, W. B. Grant, Chief Engineer Buenos Ayres Southern Ry., remaining there for six years. Returning to Canada in 1887 he was engaged until 1890 upon the construction of the Intercolonial Ry. in Cape Breton; from 1890 to 1893 he was engaged on survey work east of Montreal for the C.P.R.; from 1893 to 1897 he was on construction work on what are known as the Flagler Roads in the U.S., since which time his record has been: 1897 to 1900, on construction Crow's Nest Pass Line, and Kootenay and Arrowhead Ry., for C.P.R.; 1900 to 1903, chief draughtsman construction department C.P.R., Montreal; May, 1904, to Feb., 1905, on location work for the C.P.R. in British Columbia; Feb., 1905, to Sept., 1906, on location work for the National Transcontinental Ry., Northwest of Quebec; Sept., 1906, to May, 1907, assistant District Engineer National Transcontinental Ry., Quebec.

A. E. Doucet, whose portrait appears on the first page of this issue, was born in Montreal, June 9, 1860. He graduated at the Royal Military College, Kingston, and began his profession as civil engineer in 1880. Was assistant engineer on the C.P.R. until 1887, during which time he was on location and construction of the Algoma branch and the main line around Lake Superior. Was assistant engineer on the C.P.R. Lachine bridge from April, 1885, to Dec., 1885, then Division Engineer on the C.P.R. between St. Philip and Iberville, P.Q., from Dec., 1885, to April, 1887. Went with R. G. Reid in 1887 as his engineer, and remained with him till 1898, being employed on the construction of the Sault Ste. Marie Ry., including bridge over the St. Mary's River, from April, 1887, to Dec., 1887; on the Cape Breton extension of the I.C.R. from Dec., 1887, to Mar., 1890, and on the Newfoundland Ry. from Mar., 1890, to July, 1898. In 1898 he went to British Columbia as chief engineer of the Arrowhead and Kootenay Ry., remaining there till April, 1900. Then was engaged in revising the location of the C.P.R. main line in Assiniboia, and from Farnham, Que., to Newport, Vermont. On Nov. 15, 1900, was appointed Chief Engineer of the Great Northern Ry. of Canada, and of the Quebec and Lake St. John Railway. He continued as Chief Engineer of the G.N.R. until it was taken over by Mackenzie, Mann & Co., and is still Chief Engineer of the Q. and L. St. J. Ry. In 1904 he was also appointed District Engineer for the Quebec district National Transcontinental Ry., a position he now holds. He is a militia officer, and saw active service during the North-West Rebellion, being wounded and mentioned in dispatches.

The Board of Conciliation has issued its award in the matter of the freight handlers' dispute on the I.C.R., by which substantial increases of pay are granted. The new rates take effect from April 1 last, and payments of the accumulated amounts have, it is stated, been made.

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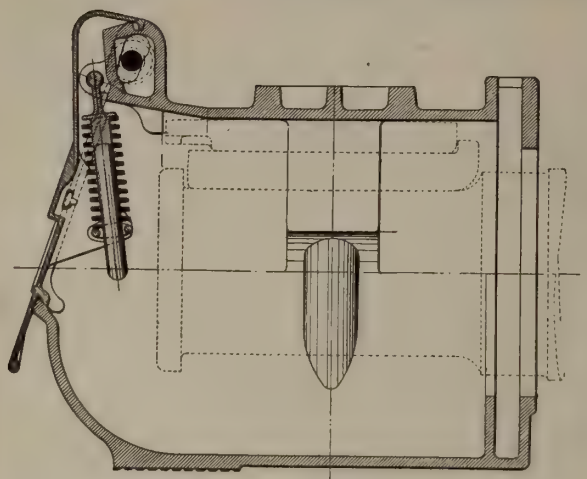

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Steam Motor Cars for the I.C.R.

Three motor cars have been built for the Intercolonial Ry. The cars are very similar in design, at the passenger end, to the first-class day cars. At the motor end the roof is of wrought iron, and curved from plate to plate to which it is bolted—thus permitting it to be removed when it is desired to take out the boiler. As it is intended to run these cars in either direction, with or without a trailer as may be desired, they are equipped with a pilot, and M.C.B. coupler at both ends, also through piping and standard hose connections for steam heating and Westinghouse air brakes. The cars carry a standard I.C.R. locomotive bell on the roof at the motor end, and are equipped with a headlight which can be carried at either end. The cars are fitted with steel platforms at each end, built by the Standard Coupler Co., New York. The window sashes and fixtures are of metal. Water tanks having a total capacity of about 1,000 imperial gallons and the vapor and gas tanks, with the necessary pipes and fittings, are slung from the underframing with wrought iron straps. The cars are boiler. Buffing springs are arranged in this casting to prevent any jarring when the car is in motion.

The locomotive has bar frames. The boiler is of vertical type and carries a pressure of 180 lbs. per sq. in. The locomotive has outside cylinders, with balanced slide valve operated by valve gear. The cylinders are 12 in. diameter by 16 in. stroke. The capacity of the engine is about 200 h.p. The journal bearings are 7 x 16 ins. long.

The interior arrangement and fittings are made up as follows, starting from the motor end of the car: The boiler room is 13½ ft. long inside. This section contains the boiler and boiler mountings, throttle lever, reversing shaft and gear, Westinghouse air brake pump, coal bunkers, etc. This section is fitted with sliding doors on each side, and an end door. Sliding doors leading to the baggage room are placed on each side of the partition. The baggage room is 8 ft. 4½ ins. long. In this section are placed the gauges in connection with the lighting system, also the battery for the electric bells and the tool case. It is fitted with a large sliding door on each side. The smoking compartment has seating capacity for 12 persons. The seats and other furnishings are similar to those in the passenger compartment. The passenger compartment is 30¼ ft. long, and has seating capacity for 40 persons. The furnishings of this compartment are similar to those of a first-class day car. The woodwork is ash. The upper and lower ceilings are three-ply white wood painted olive green, striped in gold leaf ornamentation and varnished. The window curtains are the I.C.R. standard design. The material is pantasote. The seats are upholstered in rattan. The women's and men's lavatories are 3 ft. 11 in. long. They are each fitted with a closet and wash basin, the former being manufactured by Rhodes, Curry & Co., Amherst, N.S. A nickeline water cooler and tray is placed at this end of the car. The vestibule is 7 ft. longer than the standard, in order to give more room for the engineer's brake valve, throttle closing device, hand brake shaft, whistle and bell cords, all of which are arranged in this end, thus permitting the car to be operated at each end. This vestibule is equipped with hinged side doors, sliding end doors, and vestibule trap doors. Electric bells are placed in the vestibule and boiler room for communicating between these sections. The cars are heated throughout with the Safety Car Heating and Lighting Co.'s steam heat system. The lighting of these cars is a new feature, being the vapor system, in conjunction with the incandescent mantle lamps, and is made by the Safety Car Heating and Lighting Co., New York. These are the first cars of this kind using the vapor system of lighting.

The entire motor car was designed in the I.C.R. mechanical drawing office at Moncton, under the supervision of G. R. Joughins, Superintendent of Motive Power. The locomotive was built in the I.C.R. shops, and the car body by Rhodes, Curry & Co., Amherst, N.S. The two parts were assembled and the trial tests made in the I.C.R. shops, Moncton. The first of the three cars built has gone into service—running between St. John and Hampton, N.B. Following are the principal items in the specifications:

Seating capacity	52 persons.
Gauge of track	4 ft. 8½ ins.
Length over end sills	66 ft. 0 ins.
Width over side sills	9 ft. 10 ins.
Height, top of sills to under side of plate	6 ft. 7¼ ins.
Length, inside sheathing	65 ft. 1⅜ ins.
Width, inside sheathing	8 ft. 11⅜ ins.
Width, between deck rails	4 ft. 10 ins.
Height, inside, top of floor to under side of lower deck rail	7 ft. 7¾ ins.
Outside of end sill to center of body bolster, at motor end	10 ft. 0 ins.
Outside of end sill to center of body bolster, at passenger end	7 ft. 0 ins.
Center to center of body bolsters	49 ft. 0 ins.

INTERCOLONIAL RAILWAY STEAM MOTOR CAR.

equipped with Westinghouse air brake apparatus of the latest and most approved design for cars of this class. This was specially designed for these cars by the Westinghouse Co. The passenger end of the car is carried on a standard four-wheel passenger car truck.

The method of carrying the motor end of the car is unique, having been designed first for these cars. On account of the boiler passing through the center of the car it was not possible to put a center bearing immediately under the car sills and over the center of the engine truck. This had to be carried below the ash pan and was done in the following manner: A large cast steel body bolster weighing about 4,430 lbs. was made to fit the underframing of the car body, having an opening in the center through which the boiler passes. This casting is securely bolted to the sills of the car. Four heavy steel struts carry the weight of the car body to a cast steel bolster below the engine frame having a male center bearing. This rests on a second casting, which is hung from the engine frame by means of four wrought iron hangers fitted with equalizing springs. The spring rests in cup-shaped caps and seats, which allow the car body and engine to take the different positions necessary when rounding curves. The hole in the casting under the car body is made large enough to allow plenty of side and backward and forward motion of the

Center to center of needle beams	10 ft. 6 ins.
Center to center of transoms	29 ft. 9 ins.
Height, top of rail to center of coupler	2 ft. 10½ ins.
Wheel base of truck	8 ft. 0 ins.
End door opening	2 ft. 3 ins.
Width of end door	2 ft. 4 ins.
Side door openings in baggage compartment	3 ft. 8 ins.
Side door openings in boiler room	2 ft. 3 ins.
Width of side doors in baggage compartment	4 ft. 0 ins.
Width of side doors in boiler room	2 ft. 4 ins.
Total wheel base	57 ft. 2 ins.
Body and underframe of car	Wood
Bolsters (at passenger end)	Wrought iron
Brake beams	Simplex
Brakes	Westinghouse
Couplers	M.C.B. automatic.
Journal bearings	M.C.B. 4½ ins. x 8 ins.
Truck	I.C.R. standard 4-wheel passenger.
Wheels	36 ins. W. I. disc Krupp steel tires.

Following are the specifications of the locomotive:

Cylinders	12 ins. x 16 ins. stroke.
Gauge	4 ft. 8½ ins.
Driving wheels	42 ins. dia.
Wheel base of engine	8 ft. 0 ins.
Boiler type	Circular upright with steam drum.
Heating surface in tubes	684.672 sq. ft.
Heating surface in firebox	44.04 sq. ft.
Total	728.712 sq. ft.
Grate area	11.54 sq. ft.
Working pressure	180 lbs. per sq. in.
Test	250 lbs. per sq. in.
Water tank capacity	about 1,000 gals.
Two coal bunkers (½ ton each)	1 ton.
Weight of motor (without car)	51,000 lbs.
Weight of motor (with car)	92,000 lbs.
Total weight of motor and car loaded, about	142,000 lbs.
Tractive power	8,500 lbs.
Horse-power of engine, about	200
Speed on 1% grade	25 miles.
Drivers	Coupled
Motor to haul a trailer of	40 tons.

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The engine truck is carried on four wheels coupled. Bar frame of mild steel. The boiler is carried on a cast steel saddle, and properly braced. The car body, supported on a cast steel body bolster, is attached to the equalizing spring gear of the locomotive with four steel struts; this is carried on the locomotive frame by means of cross bars and coil springs. Buffer gear and springs are arranged in the cast steel body bolster to take the forward and backward motion. Rubbing plates are secured on the sides of the boiler and to the car body bolster with ¼ in. clearance on each side. Exhaust is carried on the stack. The boiler is attached to the saddle so that it can be easily taken out and replaced. The boiler is lagged with asbestos and covered with Russian iron. Steam and exhaust pipes are lagged with asbestos, and neatly bound with heavy duck. The locomotive can be easily detached from car body.

MATERIALS IN MOTOR.

Boiler and firebox shell	Sheet steel.
Internal firebox	Firebox steel.
Frames and stays	Mild steel.
Cylinders	Hard close-grained iron.
Axles	Open hearth steel.
Axle boxes	Cast steel.
Shoes and wedges	Cast iron.
Wheel centers	Cast steel.
Wheel tires	Krupp.
Piston rod and slide bars	Steel.
Valve motion	Steel.
Stay bolts	Double refined iron.
Boiler tubes	Solid drawn copper.
Springs	Crucible steel.
Spring and brake gear	Best selected scrap.
Boiler mountings	Brass.

The boiler shell is 9 ft. 9 ins. long over all. Barrel 4 ft. 8 in. o.d., outside plates ⅝ in. thick. Longitudinal seams butt jointed, plated on both sides with ½ in. butt strap plates and double riveted. Circumferential seams single riveted. Edges of all plates machined bevel. Firebox of best firebox steel ⅜ in. thick. Tube sheet best firebox steel ½ in. thick. Stay bolts 1 in. in diameter. Boiler smoke box tube sheet ½ in. thick. Longitudinal stays 14 in number, 1¼ in. in diameter. 361 solid drawn copper tubes 1½ in. o.d. no. 12 w.g. thick. Manhole saddles fitted with patent manhead complete. Ash pan steel plates 3-16 in. thick, fitted with double doors front and back. Outside doors 3-16 in. plate. Inside doors wire netting on wrought iron frame, hinged separately and worked from cab. Grates and bearers, cast iron. Shaker and drop grates worked from cab. Boiler mountings I.C.R. standard as far as possible. Two locomotive pop safety valves muffled, size 2½ ins. Two inspirators. Steam pipe ¾ in. Suction pipe 1 in. delivery pipe, overflow 1 in., capacity 610 gals. per hour. Cylinders 12 ins. diameter by 16 in. stroke, of special tough, close-grained, cold blast iron, properly machined and bolted to frame with turned bolts. Pistons of cast iron solid type with plain rings sprung on. Piston rods of toughened steel ground and keyed to crossheads. Valves, balanced slide. Bar frames of mild steel or wrought iron 4 in. x 3 in. section of top bar. Properly machined where necessary. Truck fitted with Westinghouse air brake. In addition to the air brake apparatus the locomotive is fitted with a hand brake. A 9½ in. air pump is attached to the boiler or in some suitable place in the cab. An engineer's brake valve is supplied for both ends of the car. The saddle is of cast steel turned to fit boiler foundation ring and machined to fit the frames. Horn blocks are forged on the truck frame. Axle boxes of cast steel. Axles are of best open hearth steel, 7 ins. in diameter, turned all over. Journals 7 in. x 16 in. long. Wheel centers are of cast steel, forced on to the axle with hydraulic pressure. Tires of Krupp crucible steel, 3 in. tires flanged 5½ in. wide, secured by shrinkage and lip left off. Main and side rods of special mild steel. All made I section. Crank pins of toughened steel. Link motion arranged so as to give as nearly as possible equal cut-offs in both gears. Reverse lever in the cab. Throttle lever placed in a convenient position in the cab, and so arranged that it can be operated from the cab or rear end of the car. Driving springs open hearth spring steel, 8 in number, placed two over each box on each side of the frame, of sufficient strength and flexibility to ensure easiness in running. The main water tank is of steel plate, 3-16 in., tank 19 ft. 2½ ins. long by 30 in. wide, by 26 in. deep. Capacity about 600 imperial gallons. Two smaller circular tanks 24 in. in diameter by 9½ ft. long, each holding about 200 gals., making a total capacity of 1,000 imperial gals. Coal bunkers of steel plate, with capacity of about a ton. Two bunkers holding half a ton, each suitably arranged in the cab. Stack of sheet steel, straight type, fitted patent spark arrester.

National Transcontinental Railway.

H. D. Lumsden, Chief Engineer, arrived in Winnipeg Aug. 13 from Ottawa, for the purpose of making an inspection of the construction operations eastward, carried on during the summer. It is reported that satisfactory progress has been made during the year with the grading and tracklaying on the portion under contract from Winnipeg, easterly to the junction with the Lake Superior branch from Fort William, which is being constructed by the G.T. Pacific Ry.

The Commissioners of the Transcontinental Ry. will receive tenders to Sept. 5, for the construction and erection of the steel superstructures and floor systems, with ties and guard rails complete, required for bridges at the following points in District B., west of Quebec: Grand Bras d'Arme, mileage 38.9; Lachevrotiere River, mileage 39.93; Nigerette, mileage 46; Tawachiche River, mileage 83; Roberge Creek, mileage 85; River des Eaux Mortes, mileage 95; viaduct of River du Milieu, mileage 97; crossings of Brochet River at mileages 99, 101.5, 102, 108.5, and 109; Creek a Beauce, mileage 115; overhead crossing, Quebec & Lake St. John Ry., mileage 118.25; Little Bostonnais, mileage 119.5; Big Bostonnais, mileage 124; Croche River, mileage 127; River au Lait, mileage 128.9; St. Maurice River, mileage 129.

GRAND TRUNK PACIFIC RY.

F. W. Morse, Vice-President and General Manager, returned to Montreal Aug, 8, after having been absent since July 4 inspecting the work in progress on the line. He said in an interview that the connection between Fort William and Winnipeg would not be made in time to carry the present season's crop. The company's branch from Fort William to Peninsula Lake, or Lake Superior Junction, would be completed, but the main line of the National Transcontinental Ry. into Winnipeg, which the Government is constructing, would not be completed. Satisfactory progress was being made on the line west of Winnipeg. A good deal of the grading and tracklaying between Winnipeg and Portage la Prairie had been completed, while about 60 miles of track had been laid and ballasted beyond Portage la Prairie. By the time the cold weather set in it was expected to have about 235 miles west of Portage la Prairie completed. Further west the bridge construction was being proceeded with as rapidly as possible, and the other work was well forward. The steel bridge over the Battle River would be ready for the rails this autumn. The one over the south Saskatchewan, just south of Saskatoon, was just as far advanced, and the one at Clover Bar was approaching the finishing stage very fast. Preparations were being made to start construction west of Edmonton at once. It was impossible to say what mileage would be operated this year.

C. Schrieber, Consulting Engineer for the Dominion Government, stated, Aug. 16, that by the time construction for the year had been completed, track would be laid from Winnipeg to Saskatoon, 465 miles. Track had been laid at the last report he received for 120 miles from Portage la Prairie westerly, and the roadbed was practically ready for rail laying the rest of the way to Saskatoon. Three divisional points had been selected along the route, and roundhouses and terminal facilities were being established. Station buildings were also being erected this year every few miles along the line.

Reports from Rivers, Man., state that track had been laid to that point, 143 miles west of Winnipeg, July 30, and that an 18-stall roundhouse and other buildings were being erected there. The station at Portage la Prairie, which is being built to accommodate the G.T. Pacific Ry., and the Midland Ry. of Manitoba (Great Northern Ry., U.S.), is under construction, the contractors being the J. McDiarmid Co., of Winnipeg.

From Edmonton west the line has been surveyed through the Yellowhead Pass and well into British Columbia. The few miles still unsurveyed between this point and Prince Rupert will be taken care of during the summer. Since the route of the new line has been definitely surveyed through the Yellowhead Pass and the country beyond there has been a strong move to settle the big plateau between the Rocky and Cascade Mountains through which the line will pass. This is especially the case in the Bulkley and Temple Valleys, which are said to enclose vast tracts of particularly fertile land, not only adapted for agriculture, but suitable for fine fruit farming.

A contract is reported to have been let to Foley Bros. and Larson for the construction of 180 miles from Kitamaat on the Pacific Coast to Hazelton, B.C., and reports from the coast state that it is expected that a contract for a section of the main line from Prince Rupert to Kittesalas Canyon, 100 miles, will be let in the fall. In this section there is reported to be some very heavy rock work, and that even under the most favorable conditions it will take a couple of years to get the 100 miles finished.

C. M. Hays, and F. W. Morse, President and Vice-President, have been at Vancouver, B.C., and local reports state they are negotiating to purchase the Vancouver, Westminster and Yukon Ry., which has a charter to construct a line from Vancouver to Dawson, Yukon. The existing lines of the V.W. and Y. Ry. give a connection between the Great Northern Ry. (U.S.) line at New Westminster and Vancouver.

The proposal of the directors of the Canadian General Electric Co., Ltd., to increase the capital stock of the company by the issue of $2,000,000 7% preferred and $1,000,000 common stock, was ratified at a meeting of the shareholders, Aug. 15.

The Terminal Construction and Investment Co., Ltd., has been incorporated under the British Columbia Companies' Act, with a capital of $100,000, for the purchase of, development and sale of land, and in connection therewith to carry on business operations of all kinds. The company may construct wharves, docks, harbors, piers, warehouses, tramways, telephone and telegraph lines, and may own and operate steam and other vessels.

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Illinois Central Railroad	702
Imperial Bank of Canada	708
Independent Pneumatic Tool Co, Chicago, Ill.	646
Intercolonial Railway	664
International Correspondence Schools, Chicago	646
International Mercantile Marine Co.	688
Jessop, Wm., & Sons Ltd., Sheffield, Eng.	706
Kelson, The W. H., Co., Montreal	710
Kennedy, Wm., & Sons (Ltd.), Owen Sound, Ont.	700
Kerr Engine Co. Ltd., Walkerville, Ont.	698
Latrobe Steel & Coupler Co., Philadelphia, Pa.	688
Lewis, Rice & Sons, Toronto	682
Leonard, E. & Sons, London, Ont.	710
Locomotive and Machine Co. of Montreal. Ltd.	636
Mail Job Printing Co., Ltd., Toronto	706
McCaskill, Dougall & Co., Montreal. Cover 1	
McClintock Mfg. Co., St. Paul, Minn.	672
McConway & Torley Co., Pittsburgh, Pa.	650
McCord & Co., Chicago, Ill.	668
McGregor-Banwell Fence Co., Ltd., Walkerville.	690
McDougall John, Caledonian Iron W'ks Co., Ltd.	698
McKenzie, The M. Co., Ltd., Montreal	710
Mechanical Mfg. Co., Chicago, Ill.	710
Metcalf, John S., Co., Chicago, Ill.	706
Midland Towing & Wrecking Co., Ltd., Midland, Ont	710
Miller Bros. & Toms, Montreal	704
Modoc Soap Co., Philadelphia, Pa.	710
Montreal Steel Works, Ltd., Montreal.	664
Morrow, John, Machine Screw Co., Ltd., Ingersoll	710
Mussens Limited, Montreal. Cover 1	
National Malleable Castings Co., Cleveland, O. Cover 1	
New Hotel Brevoort, Chicago, Ill.	672
Norton, A. O., Coaticook, Que.	644
O'Connor, J. J., Port Arthur, Ont.	710
Ontario Wind Engine and Pump Co., Toronto.	700
Orford Copper Co., New York	684
Owen Sound Wire Fence Co., Ltd., Owen Sound.	688
Page Wire Fence Co., Ltd., Walkerville, Ont.	694
Pere Marquette Rd.	708
Peter Smith Heater Co., Detroit, Mich.	678
Phillips, Eugene F., Electrical Works, Ltd.	708
Piper, The Hiram L., Co., Ltd., Montreal.	710
Piper, N. L., Railway Supply Co., Ltd., Toronto.	690
Polson Iron Works, Ltd., Toronto.	654
Porter, H. K., Co., Pittsburgh, Pa.	648
Positive Lock Washer Co., Newark, N.J.	708
Prowse, G. R., Montreal	694
Pyke, J. W., & Co., Montreal	666
Pyle National Electric Headlight Co., Chicago.	642
Rail Joint Co., of Canada, Ltd., Montreal	642
Railway Materials Co, New York City	707
Rhodes, Curry & Co., Ltd., Amherst, N.S.	656
Robb Engineering Co., Ltd., Amherst, N.S.	658
St. Thomas Brass Co., Ltd., St. Thomas, Ont.	682
Safety Car Heating & Lighting Co., New York.	686
Sheriffs Mfg. Co., Milwaukee, Wis.	702
Simplex Railway Appliance Co., Ltd. Cover 4	
Smart, James, Mfg. Co., Ltd., [illegible]	684
Soule Raw Hide Lined Dust Guard Co.	680
Standard Car Truck Co., Chicago, Ill.	674
Standard Coupler Co., New York City	702
Standard Explosives, Limited, Montreal	670
Standard Inspection Bureau, Ltd., Toronto.	708
Standard Steel Works, Philadelphia, Pa.	688
Steel Concrete Co., Ltd., Montreal	662
Stevens, F. B., Detroit, Mich.	676
Submarine Signal Co., Boston, Mass.	692
Taylor, Homer, Montreal	700
Toronto Bolt and Forging Co., Ltd., Toronto.	686
Toronto Engraving Co., Toronto	696
Toronto Pressed Steel Co., Ltd., Toronto	692
United Typewriter Co., Ltd., Toronto.	690
Valentine & Sons Publishing Co., Montreal	—
Vulcan Iron Works Co., Toledo, Ohio.	707
Vulcan Iron Works, Wilkes-Barre, Pa.	707
Washburn Steel Castings & Coupler Co., The.	710
Wire & Cable Co., Montreal	670
Wolfe Brush Co., Pittsburg, Pa.	694
Wood, G. S., Chicago, Ill.	692
Woodman, R., Mfg. and Supply Co., Boston, Mass.	700

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TRANSPORTATION APPOINTMENTS.

Boston and Maine Rd.—G. H. Folger, heretofore Superintendent of the Terminal Division, has been appointed Assistant General Superintendent. Office, Boston, Mass.

Buffalo, Rochester and Pittsburg Rd.—R. W. Davis, heretofore General Freight Agent, has been appointed Freight Traffic Manager.

Canadian Pacific Ry.—W. H. Sleep, heretofore foreman blacksmith G.T.R. at Point St. Charles, has been appointed foreman blacksmith in connection with the car department at the C.P.R. Angus shops, Montreal. The blacksmith shops of both the locomotive and car departments are under one roof, J. Fenwick being foreman blacksmith in charge of all matters pertaining to the locomotive department.

J. R. Spragge, heretofore road foreman of locomotives district 2, Ontario Division, has been transferred to a similar position in district 3. Headquarters, Toronto.

L. G. Roblin has been appointed road foreman of locomotives district 2, Ontario Division, succeeding J. R. Spragge, transferred to district 3, Ontario Division. Headquarters, London, Ont.

P. Coakley, heretofore assistant roadmaster London section and Guelph and Goderich branch, has been appointed Roadmaster, Guelph and Goderich Ry. Office, Guelph, Ont.

A.H. Eager, heretofore general foreman Calgary, Alta., has been appointed District Master Mechanic, Kenora, Ont.

The initials of the Travelling Passenger Agent for the C.P.R. Atlantic Steamship Lines at Winnipeg are H. M. and not W. H. MacCallum as stated in our August issue.

C. E. Mansfield was recently appointed Chief Train Dispatcher district 2, Western Division, not trainmaster, as stated in our July issue.

S. Newmarch, heretofore locomotive foreman, Winnipeg, has been appointed general foreman, Calgary, Alta.

J. C. Reed, heretofore leading hand at Cranbrook, B.C., has been appointed locomotive foreman at Medicine Hat, Alta., vice J. Archibald, transferred.

J. T. Arundel, heretofore Superintendent district 2, Central Division, Winnipeg, has been appointed Superintendent district 2, Pacific Division, Vancouver, B.C., succeeding H. E. Beasley, who has been granted six months' leave of absence.

F. A. Valentine, heretofore Travelling Passenger Agent, Los Angeles, Cal., has been appointed Travelling Passenger Agent, with office at Spokane, Wash.

A. A. Polhamus has been appointed Travelling Passenger Agent, with office at Los Angeles, Cal., succeeding F. A. Valentine, transferred.

G. Thompson, heretofore trainmaster district 2, Central Division, has been appointed acting Superintendent of that division, vice J. T. Arundel, transferred to Pacific Division. Office, Winnipeg.

Chicago and Alton Rd.—W. C. Mueller has been appointed Travelling Passenger Agent for the State of Michigan (except the northern peninsula) and the Province of Ontario, succeeding the late L. H. Peck. He will report to the General Agent of the Passenger Department at Chicago. Headquarters, 1302 Majestic building, Detroit, Mich.

Grand Trunk Ry.—The following agents have been appointed: Portland (freight), Me., J. M. Riddell; Lacolle Jct., Que., H. A. Dunn; Whites, Que., A. Boyer; St. Agnes, Que., R. Fortin; Montreal (freight), Que., R. W. Scott; Omemee Jct., Ont., C. L. Bowles; Midland, Ont., G. M. Morgan (Acting); Markham, Ont., W. T. Byam; Sutton, Ont., F. S. Cochrane; Newmarket, Ont., A. Donnelly (Relieving); Bracebridge, Ont., J. Willoughby; Huntsville, Ont., R. W. Groves; Toronto Jct., Ont., G. A. Fernley; Norval, Ont., G. H. Jackson; Paris (Passenger), Ont., W. J. Moore; Marshville, Ont., J. C. Cook; Cayuga, Ont., A. T. Krafft; Nelles Corners, Ont., H. C. Cotter; Elmwood, Ont., C.M. Sheppard; Caldwell, Ont., Jno. Joint.

Great Northern Ry. (U.S.).—F. H. McGuigan, First Vice-President, has resigned.

A St. Paul, Minn., press dispatch, dated Aug. 16, says Howard James, heretofore Director of Purchases, has been appointed Vice-President to succeed Mr. McGuigan, and that he will have charge of the operating department.

Intercolonial Ry.—J. J. Wallace, General Freight Agent, has been granted three months' leave of absence. He is going to Summerland, B.C., and may remain there and not return to the I.C.R. service.

Maritime Coal, Ry. and Power Co.—The officials of the company are: Manager, G. B. Burchell; Accountant and Cashier, N. T. Avard; Mechanical Engineer, M. Osbourne.

Minnesota and International Ry.—The office of W. H. Gemmell, General Manager, has been removed from St. Paul to Brainerd, Minn.

New Brunswick Southern Ry.—T. Steers, heretofore in the C.P.R. service, has been appointed roadmaster N.B.S.R. The position is stated to be only a temporary one, and that he will return to the C.P.R. in the fall.

New York Central and Hudson River Rd.—W. O. Thompson, heretofore Division Superintendent of Motive Power, Oswego, N.Y., has been appointed Master Car Builder, succeeding the late J. McBeth. Office, Buffalo, N.Y.

Reid Newfoundland Co.—J. J. Lacey, heretofore assistant agent at North Sydney, N.S., is reported to have been appointed freight agent at St. Johns, Nfld.

White Pass and Yukon Ry.—J. H. Rogers, heretofore Traffic Manager, is reported to have resigned to take up the duties of a similar position on the Tanana Valley Ry., Fairbanks, Alaska.

G.T.R. Betterments, Construction, Etc.

Toronto-Hamilton Line.—An unconfirmed press report states that it is the intention of the company to put four tracks on its line between Toronto and Hamilton, and in connection with the plans to replace the overhead bridge on the Waterdown road with a subway. This construction of the subway, the report states, will be started this fall.

Brantford Double-Track Work.—A press report says that the last 4½ miles of double-track work in the vicinity of Brantford, Ont., will be completed by Aug. 31. This short section lies from Brantford easterly to Alford, on the line to Hamilton.

London Improvements.—The chairman of the Railway Committee of the London City Council stated recently that the committee would shortly publish the draft agreement respecting the elevation of the G.T.R. tracks in London, Ont., submitted to the company in March. No reply had been received to this proposition therein made.

London Car Shops.—Tenders are under consideration for an addition to the car works at East London, Ont., at a cost of about $55,000. The new building will be of brick.

Sarnia Tunnel.—E. H. Fitzhugh, Third Vice-President; W. G. Brownlee, General Transportation Manager, and Superintendent Gillen, inspected the work in operation at the Sarnia Tunnel, Aug. 9. The electrical plant for hauling the trains through the tunnel is expected to be ready for operation during Sept.

Battle Creek and Durand.—Work has been commenced upon the construction of the new car and locomotive shops at Battle Creek, Mich., a description of which has already been published. A 40-stall roundhouse is under construction at Durand, Mich.

Misrepresentation of Freight Shipped.

T. Marshall, Secretary Canadian Freight Association, has issued the following circular to freight inspectors:

"Your attention is called to rule 17 of Canadian Classification 13, effective Sept. 1, reading as follows:

'a. All shipments are subject to examination and inspection as to correct description and weight, and will be charged at the gross weight, except that when an article is classified to be accepted at estimated weight, such estimated weight will apply.

'b. If upon inspection it is ascertained that the articles shipped are not those described in the bill of lading, the charges must be paid upon the articles actually shipped, and at the rates and under the rules provided for by this classification, and subject to the provisions of sub-section c of this rule.

'c. If any person or company shall knowingly or wilfully by false classification, false weight, false representation of the contents of any package, or false report of weight, or by any other device or means, whether with or without the consent or connivance of any agent or agents of the transportation company, with the intention of obtaining transportation for goods at less than the regular tolls then authorized and in force, such person or company shall, in addition to the regular tolls then authorized or in force, be liable to pay to the transportation company a further toll of 50% of the regular charge. (See section 400 of the Railway Act, Chap. 37, R.S.C., 1906, page 1 of Classification).'

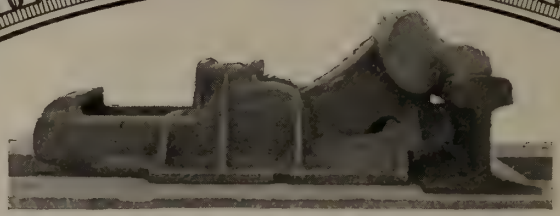
"The purpose of this rule is to prevent the continuance of misrepresentation, a practice which places shippers who will not resort to fraudulent means in a most unfair and disadvantageous position as compared with shippers who commit such fraud. There is no desire upon the part of the railways to penalize any shipper who may, through a misinterpretation of the classification, inadvertently misclassify a shipment; but such misinterpretation is not necessary, because a shipper is not asked to classify his goods. All he is required to do is to correctly and fully describe them in his shipping bills and the railways will apply thereto the proper classification. The sole object of the railways is to stop deliberate fraud and to protect honest shippers. If after reasonable efforts have been made by you to ascertain and determine the true character of the property, there remains no doubt in your minds as to the wilful intent of the shipper to misrepresent, you will impose the extra toll of 50% and report particulars to me. If, however, there is any reasonable doubt in your minds, you will permit the shipment to go forward as consigned, without imposing the extra toll, and report the circumstances to this office."

We are advised that the various railway companies will issue a similar circular to agents.

The attention of shippers is directed to the new Classification and changed conditions, both with regard to some of the rules and ratings, and also the owner's risk conditions, with the object of having shippers compare the ratings in Classification 13 with those heretofore in force, so that they may ascertain for themselves whether any change has been made in the ratings of the goods they ship. Copies of the new Classification will be sent shippers free, on application to the Canadian Freight Association, Union Station, Toronto.

The statement published in the general press to the effect that the C.P.R. had placed contracts with two companies to supply the railway with 12,000 Japanese laborers, is denied by R. Marpole, General Executive Assistant of the company at Vancouver, B.C.

GUARDIAN OF THE MAIN TRACK



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Railway Finance, Meetings, etc.

Atlantic and Lake Superior Ry.—Bondholders who shall on or before Sept. 3 next transfer and deliver their bonds to the Royal Trust Company, together with all coupons from Sept. 1, 1895, inclusive, shall be entitled to receive, and the Royal Trust Co. shall issue to them, in exchange for the bonds thus transferred and delivered, certificates of participation in the Atlantic and Lake Superior Ry. Trust Fund in the following proportions, namely: 20% in ordinary certificates and 10% in deferred certificates, calculated on the nominal capital value of such bonds; it being an express condition that such transfer and delivery shall operate as an absolute sale assignment and transfer by the bondholders to the Royal Trust Co. and their successors in trust for the benefit of the said trust fund, of all claims against the company under the bonds thus transferred and delivered. And in pursuance of clause 6 of the scheme of arrangement the bondholders are invited to transfer and deliver under the foregoing conditions to the Royal Trust Co., the bonds held by them not later than Sept. 3, after which day no bonds will be received for the purpose of participating in the trust fund.

A general meeting of the holders of certificates of participation was held Aug. 28, at the Royal Trust Co.'s office, Montreal, for the purpose of authorizing the acquisition of the claims now held by the trustees for the bondholders of the A. and L.S. Ry., against the A. and L.S. Ry. Co. and its bondholders, and of confirming the issues of certificates of participation heretofore made by the trustees of the fund.

Atlantic and St. Lawrence Rd.—The annual meeting of shareholders was called for Aug. 6, but the meeting was adjourned indefinitely, there not being a quorum present. The retiring board of directors will hold over. The company does not issue an annual report. The line is leased to the G.T.R.

Canadian Northern Ry.—Notice is given by G. Ruell, Chief Solicitor of the Edmonton and Slave Lake Ry. Co., a subsidiary of the C.N.R. Co., that there has been deposited in the office of the Secretary of State of Canada a mortgage dated July 1, from the E. and S.L.R. Co. to National Trust Co., Ltd., securing an issue of first mortgage bonds to the extent of $20,000 a mile on the portion of the railway between Edmonton and Athabasca Landing, Alta., a distance of about 100 miles.

W. Mackenzie, President, states that the recent report that the common stock of the company would shortly be put on the market was absolutely untrue. The total value of the common stock is about $40,000,000, and none of it has been issued to the public.

Canadian Pacific Ry.—There was a marked increase in the number of acres of land disposed of by the company in 1906, as compared with the two years previous, and a considerably larger price per acre received for same. In the past five years over $27,690,000 has been realized from this source. The following table shows the number of acres sold, price per acre received and amount received for land, from 1902 to 1906, both years inclusive:

	Acres.	Price.	Amount.
1906	1,115,743	$5.84	$ 6,513,452
1905	509,386	4.80	2,446,300
1904	928,854	4.10	3,807,248
1903	2,639,617	3.67	9,695,673
1902	1,589,008	3.29	5,227,762
Total	6,782,668	$4.34	$27,690,435

The original land grants amounted to 32,790,000 acres. Of this amount all but 13,473,350 acres had been disposed of on June 30, 1906; and over $36,000,000 of the proceeds were put into the property. The value of the lands remaining on June 30 last was, at the average price of $5.84 per acre, $78,684,364. Add to this the $16,382,823 due from deferred payments and there is a grand total of $95,067,187, an amount equal to $78 per share on the $121,680,000 common stock outstanding.—Montreal Star.

At a meeting of directors in Montreal, Aug. 12, dividends at the rate of 2% on preference stock, and 3% on common stock, for the year, ended June 30, were declared. An additional ½% will be paid on the common stock at the same time, out of the proceeds of land sales. The following figures show results under various heads for the financial year ended June 30:

Gross earnings	$72,217,528
Working expenses	46,914,219
Net earnings	25,303,309
Net earnings of steamships in excess of amount included in monthly reports	723,649
Income from other sources	1,640,832
Total net income	27,667,790
Deduct fixed charges	8,511,756
Surplus	19,156,034
Deduct amount transferred to steamship replacement fund	700,000
Deduct contribution to pension fund	80,000
Net revenue available for dividends	18,376,034
After payment of all dividends declared for the year the surplus for the year carried forward is	9,339,005

Esquimalt and Nanaimo Ry.—By the decision of the Imperial Privy Council the settlers' rights to coal and other minerals in the Nanaimo district of B.C., within the E. and N. Ry. belt is confirmed. In 1904 the B.C. Legislature passed an act under which all the settlers claimed mineral rights. A decision of the B.C. courts held that these lands were reserved to the railway company under the Dominion grant, and that the settlers could not have any pre-emption rights, nor that the legislature had any control over the lands, and that the act was unconstitutional. This decision is now reversed, and the act declared to be valid.

Grand Trunk Ry.—The directors have declared dividends for the half-year ended June 30, as follows: 5% on the 1st and 2nd preference stock and 4% on the guaranteed stock. No provision has been made for the payment of any dividend upon the third preference stock.

Mabou and Gulf Ry.—The sale of the property of the Mabou Coal Mining Co., apart from the lines, franchises, and charter of the M. and G. Ry., to the Eastern Trust Co., for $210,000, has been confirmed in the Nova Scotia courts.

New Brunswick Ry.—At the annual meeting at St. John, N.B., Aug. 1, W. T. Whitehead, Fredericton, N.B., was elected a director, succeeding the late J. Hardisty, Montreal. Following are the officers and directors for the current year: President, R. Meighan, Montreal; Vice-President, Lieut.-Col. H. H. McLean, St. John; Land Agent, W. T. Whitehead; other directors: Lord Strathcona, J. Turnbull, F. S. Meighan, Montreal; J. S. Kennedy, M. Willis, J. and S. Thorne, New York; Secretary-Treasurer, A. Seeley. The company does not issue an annual report. Its railway is operated by the C.P.R., but the company owns a large area of land in N.B. In connection with this land an act was passed by the N.B. Legislature in 1905 to facilitate the opening up of the same for settlement, under which the Province purchased a large area at 75c. an acre. Last session of the Legislature an act was passed adding an additional section to the act of 1905, providing that the conveyance by the said company to the King, of the said lands, or of the said company's right, title and interest therein, shall vest the said lands and the complete title thereto in His Majesty, his successors and assigns, in fee simple, and freed and discharged from all incumbrances of any nature or kind. The transfer of 50,000 acres in the Tobique River valley from the railway company to the Government, has just been completed under the provisions of these acts.

Reid Newfoundland Co.—The question of the appointment of a third arbitrator in the proceedings brought by the company against the Government to recover $650,000 for rolling stock supplied between 1901 and 1904, is before the Newfoundland Courts. The claim is one arising as a result of the amendment of the contract between the Government and R. G. Reid, subsequently transferred to the R.N. Co.

Temiskaming and Northern Ontario Ry.—Earnings for May, $77,041; expenses, $51,496; net earnings, $25,545. Mileage in operation, 138.9 miles, against 112 miles in May, 1905.

Toronto, Hamilton and Buffalo Ry.—Earnings for July $76,146.39, against $62,739.23 for July, 1906.

Victoria and Sidney Ry.—Press reports in Victoria, B.C., state that the Victoria and Sidney Ry., which forms a part of the Victoria Terminal Ry. and Ferry Co.'s undertaking, will shortly be sold to the C.P.R., and that it will be operated by electricity. It is at present controlled by the Great Northern Ry. Co. (U.S.A.).

Logging Railways in British Columbia.

NAME.	Camp Location	Miles Track.	Locomotives. Geared	Locomotives. Direct Con.	Logging Engines.	Daily Av. Output Ft.
**Abbottsford Lumber Co.	Abbottsford	3	..	1	1	25,000
B.C.M., T. & T. Co., Vancouver	Rock Bay	13	..	3	11	150,000
" " "	Granite Bay	4	..	1	4	50,000
" " "	Salmon River	5	..	1	6	50,000
" " "	Bear River	5	..	1	3	50,000
** " " "	New Westminster	6	..	1	4	60,000
Brunette Sawmill Co., Sapperton	Comox	3	1	..	10	150,000
Columbia River Lum. Co., Golden	Carlin	3	..	1	2	50,000
" " "	Beaver	3	..	1	1	40,000
" " "	Golden	2	..	2	..	60,000
Crow's Nest Pass Lumber Co., Wardner	Wardner	..	..	1	..	.....
**East Kootenai Lumber Co., Cranbrook	Cranbrook	5	1	..	..	.....
Ironside, Rennie & Campbell, Vancouver	Lake Buntzon	1½	..	..	1	20,000
**McLaughlin, C. R., N.Westminster	Forward Harbor	3	1	..	2	60,000
**McNair Timber Co., Vancouver	North Vancouver	4	1	..	3	120,000
*Mundy Lumber Co., Three Valley	Three Valley	4	1	..	2	80,000
Otis Staples Lumber Co., Wycliffe	Wycliffe	10	2	..	2	100,000
Shawinigan Lake Lumber Co., Victoria	Shawinigan Lake	3	1	..	3	40,000
Victoria L. & M. Co., Ltd., Chemainus	Chemainus	21	3	1	16	250,000
**Victoria L. & M. Co., Ltd., Chemainus	Union Bay	4	2	..	4	100,000

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Toronto Union Station, Tracks, etc.

The following report has been made to the Toronto City Council by W. Barclay Parsons, New York; C. B. Smith, Toronto; and C. H. Rust, City Engineer of Toronto: In compliance with the resolution of Council, dated Jan. 28, 1907, in which the City Engineer was authorized to retain the services of consulting engineers to act with him, to report upon the whole question of railway transportation facilities along the entire front of the City, extending from the Humber River on the west to the extreme limits of the City on the east, together with consideration of the plans submitted by the railway companies of the proposed new union station, the various schemes of trackage and other arrangements incidental thereto, he engaged the services of W. Barclay Parsons of New York, and C. B. Smith of Toronto, and the Commission thus appointed submits the following report:

As soon as the formation of the Commission was determined upon, we held meetings in Toronto and jointly made an examination of the railways from the Humber River east, of the various proposed sites for the new passenger station, of the water front and streets, and the other physical conditions of Toronto, in so far as they bore upon the problems contemplated by your resolution. Subsequently Mr. Parsons had conferences with Mr. Berrian, who had been appointed by the Board of Trade to report to them on the same matters; with Mr. Francis, the Chief Engineer of Westinghouse, Church, Kerr & Co., who had been retained by the G.T.R. Co. to prepare plans for the new union station, and on May 16 a meeting was held in Mr. Parsons' office, which was attended by the Mayor, Messrs. Berrian, Steele and Moyes, representing the Board of Trade; Messrs. Kerr and Francis, Mr. Carrere, architect for the railway, and the members of the Commission.

The questions submitted to the Commission by the Council cover several different problems, which are not related to the extent that a decision on one concludes a decision on the others. For your convenience and for the better understanding of the matters involved, it would seem well that these various questions should be set forth and considered separately. In general they can be stated to be as follows: 1. The Passenger Station; 2. The approaches thereto from the diamond crossing on the west to Parliament St. on the east; 3. The disposition of the tracks from the River Humber to the diamond crossing; 4. Disposition of the tracks from Parliament St. to and beyond Queen St.

1.—Passenger Station.

The railway companies and the City, on April 22, 1905, entered into a general agreement as to the location of a new passenger station. In accordance with the terms of this agreement the railway company has made voluminous studies through its engineers and architects. All such studies and plans have been submitted to the Commission and explained by their designers. In general, the station as proposed is of the through type, with 10 parallel tracks. Facing Front St., and extending from York St. to Bay St., is the station building of exceedingly handsome design, and with extensive accommodations for passengers, baggage and freight. To get access to the inter-track platforms from the station building, without crossing the tracks on the level, various plans have been prepared, some based on overhead bridges, others on subways. All the tracks and platforms are to be covered by a train shed. In some of the plans the train shed is shown as requiring the closing of York St., and the doing away with the existing bridge, substituting in place thereof a new bridge to be located between Bay and Yonge Sts.

The officers of the Board of Trade, actuated by the desire to secure for the City the best and most convenient station, have urged upon your Commission the consideration of a head-on station, in which all the tracks shall terminate, to be located on the Government House property and abutting on King St. At the request of the Board of Trade, Mr. Berrian, their engineer, has prepared full and elaborate plans for a station of the head-on type, as described above. These plans have been submitted to the Commission and have been discussed by the Commission and Mr. Berrian jointly. We have considered at great length the advantages and disadvantages of both plans, and we are of the unanimous opinion that it would be better to locate the station itself substantially in the position as proposed by the G.T.R. Co., and already accepted by the City, but with certain modifications of details. We believe that Mr. Berrian has made the best possible solution of the problem for a head-on station submitted by him, reflecting great credit on his ingenuity; but even in spite of this solution the head-on station is, in principle, open to such very serious objections as to warrant its rejection. While the bulk of travel to and from Toronto is travel that terminates or originates in Toronto, there is, notwithstanding, a large portion of travel that is through traffic. A head-on station involves the necessity of every through train reversing its direction at the station or being backed in one direction while loaded with passengers across a series of junction switches and frogs, involving not only danger but a very serious delay to every train. Toronto, while being the most important city in Canada west of Montreal, is, nevertheless, not located on the shortest line between the western and eastern limits of the Dominion. The natural tendency of traffic is to seek the shortest route and line of least resistance, which in this case, from geographical reasons, would be around Toronto. Any bar that is placed in the way of the running of trains through Toronto would naturally incline the railways to send their through trains by some other route. For the proper development of Toronto's railway facilities and the encouragement of through traffic, obstacles should be removed and not imposed, and it would seem to us to be a wise policy on the part of those charged with Toronto's welfare to encourage in every way possible the passing of traffic through the City, and in the most commodious and economical manner. We believe that a head-on station is not the best type of station for Toronto for the above and following reasons. 1. Delay in through traffic; 2. The passing of all trains, some of them loaded with passengers, across a complicated system of crossings and frogs, and at times passing such trains in reverse direction; 3. Placing an absolute limit upon any increase in the size of the station, as no additional tracks could be added to the station unless the abutting streets on the east and the west of the terminal grounds were acquired; 4. Great expense, both in the construction and the acquisition of land and the displacement or re-arrangement, with attending cost, of the existing freight delivery and other yards of the G.T. and C.P. Railways.

Reverting to the plans of the G.T.R. Co., as submitted to the Commission, we would recommend that, while approving the location and general type of the building as proposed, instead of having all the tracks connected through the station, the seven tracks next to Front St. should be cut in the center of the station and for a distance sufficient to give a wide and commodious passageway. There would then be seven head-on or terminal tracks from both the east and west, or 14 such tracks in all, with three through tracks on the southerly side. A passenger going from the station to the trains, or vice versa, would then pass on a level without the inconvenience either of ascending or descending steps to any of the local tracks or to the first of the through tracks, or without crossing any track. From the northerly side of the first of the through tracks there could then be constructed a short subway beneath such track leading to the platform between the second and third of the through tracks; such subway to be used only at the time when the first of the through tracks was occupied by a standing train, which condition would rarely occur. If this modification of the G.T.R.'s plans were adopted, Toronto would have all the advantages claimed for a head-on station, namely, a terminus for local trains, direct access to platforms, and simplicity of working. In fact there could really be two head-on stations separating east and west bound traffic, with a third or through train station in connection, and in which passengers would proceed directly from the station to their trains, and with practically no longer walk than would be had with the head-on station, as above described. In fact, at times the walk might be shorter, because with the more limited track accommodations in the King St. station there might be occasion when two trains might have to stand one in front of the other on a single track, whereas with the greater number of tracks with the other station this contingency would probably never occur. Another advantage of the station as proposed, especially with the modifications here recommended, would be that the station capacity would not be limited to the present construction. The station building itself is one of very large capacity, the waiting room being actually larger than the waiting room in the present Grand Central Station in New York, which has sufficed for the traffic of the New York Central, New York & Harlem and the New England Railroad systems. Should more track accommodation be needed, it is a simple matter to add on the southerly side as many new tracks as may be needed. If such new tracks are required for through traffic, the subway connecting them could be extended; if they were required for local traffic, then the existing through tracks would be cut in the middle and the level concourse extended to the south. The type of station that the Commission has in mind and which is here recommended is somewhat similar to the station at Providence, R.I., on the New York, New Haven & Hartford Rd. Providence is a city of about the size of Toronto; in the center, however, of a much more densely populated country, with about the same number of tracks as is proposed for the Toronto station, but already doing a business about double the existing traffic at Toronto, and with the full capacity of the station never reached. Whatever type of station is adopted, the Commission is of the firm belief that York St. should not be severed, but that traffic be carried from Front St. to the water front unobstructed, and that a similar connection be made at Yonge St., a compromise bridge between Bay St. and Yonge St., to take the place of a connection at Yonge St., and the present bridge at York St., being wholly insufficient. In fact, to supply additional facilities we believe that the arrangement already made between your Board and the G.T.R. Co. for a foot bridge at Bay St. should be carried into effect. We might suggest that this foot bridge be constructed of ample width to accommodate the large number of people that reach the ferries by this street.

2.—The Approaches to the Station.

In any consideration as to what should be done to the approaches to the station, it seems to the Commission that the water front of the City and its development is of paramount importance, and that the disposition and treatment of the tracks be considered primarily from that point of view. The limits of the water front of the City within the present harbor protection are none too

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large. The total distance along the Windmill line between the western channel and the western limit of Ashbridge's Bay immediately at the foot of Parliament St., is about two miles. Of this distance a large part is occupied by railway yards, and less than one-half of it is open for development for commercial purposes. The City has established on its map and has constructed in small part a marginal street called Lake St., and has also established a line southerly of Lake St., to which improvements by piers or wharves may be carried. What should be done with the approaches to the new station necessarily has great bearing upon the water front property. An inspection of the map, even after Lake St. is completed, shows that but a small part of Toronto water front will be capable of any extensive improvement. Between the water front and the railway tracks on the Esplanade there should be sufficient space to permit the construction of manufacturing industries, warehouses, store yards or other large terminal improvements which can be served by railway connections on the one side and water connections on the other. In this respect Toronto is exceedingly favorably situated, and the full use of such situation should, it seems to us, be secured. Without attempting to go into any details of design, we have considered and recommend to you the possibility of establishing along the water front a large marginal street that should have a width of at least 125 ft., extending from, say, Cherry St. westerly to Queen's Wharf channel, connecting at that point with a proposed boulevard, which we understand is proposed to be constructed, thence to the Humber, thus furnishing a great thoroughfare the full water front of the City. If this new street were located at a distance of at least 600 ft. from the Esplanade, which would place it just southerly of the proposed location of Lake St., between Scott and Parliament Sts., there would then be a sufficient area between such street and the Esplanade for a systematic and extensive development. The water front then could be divided so as to give in the neighborhood of the foot of Yonge, Bay and York Sts., passenger accommodations for ferries and for the passenger steamers running to Hamilton, the St. Lawrence, Niagara, or to local points along the lake shore, with accommodations for the purely commercial vessels on the east, for yacht and boat clubs on the west, and connection between the railways and lake beyond, but with freedom of connection between them all. If some such plan as is here indicated were taken up and studied in detail, we believe that there would result to Toronto not only new land of great value in itself, but also a great increase in its commercial facilities that would have a far-reaching effect on all values in and business of the City. With the water front thus developed, the traffic between it and the City, not only for water-borne freight, but for freight that would be brought to the industries and warehouses by the railways themselves, will become of great importance, and its care of more concern than even that of the present existing traffic. To permit this new traffic to pass the running tracks of two great railways on level crossings, no matter how well protected by gates and watchmen, is at great cost to the company and a great burden, both in danger and delay, to the citizens. We strongly recommend to you, therefore, that steps should be taken in connection with the proposed station to so arrange the track approaches thereto that these level crossings should each and all be permanently removed. This can be done in two ways: 1. By elevating the tracks, and 2, by elevating the streets.

Both plans have their advantages, but as both of them involve certain questions of legal rights and other questions of policy as to which we are not advised, we think it better to lay before you the relative advantages of the plans, so that you may see all phases of the question. From our standpoint, however, we are of the opinion that the preponderance of advantages is in favor of the elevation of the streets. It has been suggested that the station itself be placed at such elevation as to permit the tracks running to the east to pass over all streets from Bay St. easterly, such streets to be carried beneath the tracks at their existing levels. The additional cost of the construction of the station at the higher level can be taken as negligible in amount. If the main running tracks, at least four in number (which we consider sufficient) were thus elevated and Bay St. carried beneath, a total reconstruction of the existing yards of the railway companies would, however, become necessary. The local C.P.R. freight house would have to be moved and the classification and delivery tracks connected only at the west end, instead of at both ends as at present. Along Esplanade east of Yonge St. there are at present certain tracks on the surface for car delivery and other private tracks turning into industries and warehouses. It appears, after consideration, it will be impossible to do away with these tracks. Their presence is of great importance to the business of Toronto. It has been proposed, however, that no tracks of this nature be carried across Yonge St., but we consider it necessary for the accommodation of the traffic at this point that on the north the tracks should be carried as far west as Scott St., and on the south as far as the east side of Yonge St., this latter being especially necessary to provide for the shipment of fruit which now takes place at the Yonge St. wharf. These tracks would necessarily cross all the streets east of Yonge at grade. In order to diminish the danger, it has been proposed that shifting on these tracks be limited to the night hours, or that the shifting engines be preceded by a man on foot with a flag, as the danger of running a train close to, and therefore obscured by, the masonry of a viaduct, would be exceedingly dangerous. On the other hand, if the streets are carried over the railway there need be no reconstruction of the existing yards, and there will be no interference with the industries located on the Esplanade. Crossing of all tracks at level should be absolutely eliminated, and there should even be an extension of the facilities afforded by private track delivery if the development of the water front so required it, as in our judgment it will. It would not seem necessary, in order to furnish proper connections to the water front, that every street now on the map need be connected with the marginal street. If there were four, or at the utmost five, approaches east of Yonge St., the full requirements of the case, even with the developed water front, would be met. Should a marginal street be constructed, as suggested, a distance of at least 600 ft. from the Esplanade, the gradient on the approaches crossing the tracks would not exceed 4%, which is less than the existing gradient rise from the Esplanade to Front St., at least as far east as Princess St., and such approaches would reach the grade of the marginal street on the north line without requiring curved approaches, as in the present York St. approach.

Summarizing the advantages and disadvantages of the two plans, we have for track elevation—Advantages: Every street would be carried through to the water front at its existing elevation.

(To be continued in next issue.)

The Commission appointed to investigate and report on the needs of the Georgian Bay ports will consist of M. J. Butler, Deputy Minister of Railways and Canals, and Louis Coste, of the Department of Public Works.

Too Late for Classification.

General.

It was unofficially announced in Ottawa, Aug. 29, that Hon. W. Pugsley, ex-Premier of New Brunswick, had been appointed Minister of Railway and Canals, succeeding Hon. H. R. Emmerson, resigned.

Atlantic and Pacific Ocean Marine.

The steamship companies engaged in passenger traffic with the Orient, including the C.P.R. and the Canadian-Australian lines, have decided, on account of the rise in prices of coal and general stores, to increase their rates by 10%.

Maritime Provinces and Newfoundland Marine.

The steamboat Stord from Quebec to Hudson's Bay ports, struck Mingin Island in a dense fog, Aug. 8, and strained her bow. She put in at St. John's, Nfld., for the necessary repairs to be carried out.

Express.

The barn occupied by the Canadian Ex. Co. at Stratford, Ont., was destroyed by fire Aug. 14, and two horses, with a quantity of feed, were burned.

Telegraph and Cable Matters.

The C.P.R. Telegraph Department has opened an additional telegraph office at its city ticket office, King and Yonge Sts., Toronto.

Sir H. W. Primrose, K.C.B., C.S.I., has been elected Chairman of the Pacific Cable Co., in the place of the late Sir Spencer Walpole.

W. J. Camp, Electrical Engineer C.P.R. telegraphs, reports that recently the earth currents were so severe that all the duplexes at Fort William, Ont., had to be disconnected, and at times set fire to the switchboards.

The report of the Pacific Cable Board for the year ended Mar. 31, shows a gross message revenue of £116,401, against £94,456 in 1905-06, and the entire net revenue £113,516, with an expenditure of £90,895. After providing for interest and sinking fund there is a deficiency of £54,923, against £72,556. The traffic revenue for 1906-07 is £103,000, a deficit of £69,368.

General Telephone Matters.

An arrangement has been effected by which the Dominion Government telegraph cable between Gaspe and Ellis Bay, Que., will be utilized for telephonic communication.

The Canadian Machine Telephone Co. states that it is hoped to have an automatic telephone system in operation in Brantford, Ont., by the end of the year. The company has purchased a site in the city and will erect an office building at a cost of about $8,000.

The operators engaged on the civic telephones at Fort William, Ont., were out on strike last month. They alleged many grievances, but the culminating point was the appointment of a chief operator from the U.S. She was subsequently dismissed, and the operators resumed work.

The Harrietsville Telephone Association has been incorporated under the Ontario Companies' Act, with a capital of $25,000 and offices at Harrietsville, Ont., to carry on the business of a telephone company. The provisional directors are: W. Doan, S. E. Facey, J. C. McNiven, W. B. Lane, J. Smith, W. J. Coates, North Dorchester tp., and M McB. Black, Springfield, Ont.

The General Industries Construction Co. has been incorporated under the Ontario Companies' Act, with a capital of $100,000 and offices at Toronto, for the purpose of carrying on the business of a general construction and development company. The provisional directors are: J. A. Paterson, K.C.; A. McKenzie, W. H. Templeton, and A. T. Davidson, Toronto.

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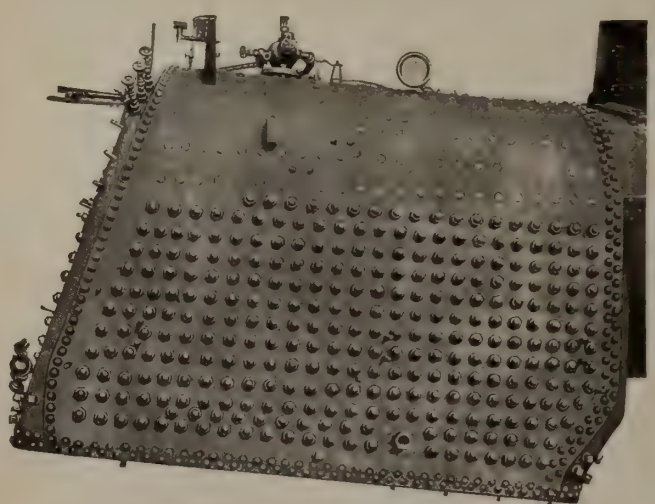

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British Columbia Electric Ry.—A contract has been let by the C.P.R. to J. B. Bright for the extension of the Vancouver and Lulu Island Ry. from Eburne to New Westminster. The V. and L.I.R. is operated by the B.C.E. Ry. as an electric line, and the extension will also be similarly operated. Grading operations were started about two miles south of Central Park, Aug. 1, and it is expected to have the extension completed and open for traffic by the end of the year.

The General Manager stated Aug. 5, that the company had completed all its agreements with the six municipalities for the construction of the projected line from New Westminster to Chilliwack, and that as soon as the directors of the company in London, Eng., gave their approval tenders would be asked for the grading. (Aug., pg. 603.)

Chatham, Wallaceburg and Lake Erie Ry.—The village municipality of Blenheim, Ont., is being asked to grant the company a franchise. (July, pg. 505).

Columbia River Tramway Co.—Notice has been given under the provisions of the British Columbia Tramway Company Incorporation Act and amendments, by T. Kilpatrick, A. E. Kincaid, F. McCarty, and G. S. McCarter, that they propose to incorporate a company with this title for the purpose of constructing a double or single track railway or tramway, with the necessary branch lines, side tracks, switches, turn-outs, poles, wires, conduits and appliances, in the West Kootenay district, within a radius of five miles from Death Rapid. The general route of the projected line is described as follows: Beginning on the bank of the Columbia River, near the foot of Priest Rapids, in West Kootenay district, thence northerly along the Columbia River valley, or near the mouth of Fissure Creek. The company proposes to carry passengers and freight over its line, and to use such motive power as may be deemed advisable.

Edmonton Street Ry.—The city council is building an electric railway to have a total length of about 6½ miles. Of this about 3½ miles of double-track line are now under construction on Jasper Ave., First St., and Namayo Ave., the streets that are now being paved. The power house will be located at the Exhibition grounds, and will be 150 by 80 ft. It will be equipped with a 600 k.w. generator, driven by gas. The lines at present constructed will be equipped with eight passenger cars, four motors, 50 h.p., and this will be added to as necessity arises. The construction work is being done by the city under the charge of W. J. Pace, Commissioner. About half the work on the Jasper Ave. line has been done, and a start has been made at grading on the other streets. It is not expected to have the lines completed until the fall of 1908. (Aug., pg. 603).

The Hamilton, Guelph and Lake Shore Ry. Co.'s charter authorizes the construction of a line from Hamilton to Guelph, Ont., via the lake shore. W. Hendrie, G. L. Staunton, of Hamilton, and M. Smith, of Burlington, Ont., are the principal promoters of the company. A local report states that it is understood that the charter will be transferred to the Toronto, Niagara and Western Ry. Co.

Hamilton, Waterloo and Guelph Ry.—The Hamilton Parks Board and Finance Committee passed a resolution Aug. 8, favoring the adoption of the route through Dundurn and Harvey parks recommended by A. F. Macallum. The route is under consideration by J. Patterson, and the other promoters of the line. (Aug., pg. 603).

Hull Electric Co.—A resolution has been passed by the city council of Hull, Que., granting permission to the company to construct a double track on Main St., and to effect other improvements; the company to pay $7,500 and $3,000 a year for 20 years for the privilege, with power to construct a loop line.

Levis County Ry.—A proposal for the extension of the line to St. David's toll house, has been discussed between the residents, Levis City Council and the company, and it is said that the work will be gone on with at an early date.

Moncton Street Ry.—The section of the bill authorizing the Moncton City Council to construct an electric railway within the city was not pressed last session of the New Brunswick Legislature. The question of the construction of an electric railway is still under consideration, but it is not likely that an early decision will be reached as to whether the city will construct the line itself or give a franchise to a company.

Mount McKay and Kakabeka Electric Ry.—The by-law passed by the taxpayers of Fort William, Ont., granting the company a right-of-way into the city, provides also that in case the city should acquire the Fort William portion of the Port Arthur Ry. at any time, the company shall have the right of lease or purchase; that the fare shall be 5c. or six tickets for 25c., with cheaper tickets for workmen and school children; that a half-hour service shall be maintained from each end, and that the company shall keep the tracks clear of snow. Plans showing the location of the lines in the city have been filed with the Ontario Railway and Municipal Board for approval.

Niagara, St. Catharines and Toronto Ry.—A right-of-way is being secured for the extension of the line from Welland to Port Colborne, Ont. The extension to Welland, it is expected, will be in operation early in Sept., and it is said that the new construction will be started immediately. (Aug., pg. 603).

Ottawa Electric Ry.—The work of relaying the track on Sussex St. with heavier rails is in progress. The city council has authorized the preparation of a by-law to permit the construction of a number of additional lines and extensions in the city. (July, pg. 505).

St. John Ry.—By an act passed last session of the New Brunswick Legislature, an extension of time is given for the construction of certain extensions; and authority is given to lay tracks in Queen Square, Carleton, such tracks to be removed by July, 1912; and to construct a railway between Watson and Lancaster streets by 1912.

Sydney and Glace Bay Ry.—The central power station and car barns are to be located at Glace Bay, N.S. The town council has agreed to grant the company exemption from taxation, and to give a fixed rate for water for a term of years. The buildings are to be located close to Dominion No. 4, and the erection of the same is to be gone on with at once.

Toronto Suburban Ry.—Surveys have been made for a line from Keele St. to the Lake Shore road, and it is said that construction will be started as soon as the councils of Toronto Junction and York Township have approved of the plans. The route proposed is along South Keele St. to Annette St., along that street to Elizabeth St., and along that street through Swansea, connecting with the Lake Shore road at the Bolt Works. An alternative route surveyed is from Dundas to Louisa, and along that street to Elizabeth St. The company favors the Keele St. route, as it would be an extension of its present line to Weston. (June, pg. 429).

Toronto Ry.—The Toronto Board of Control and the Toronto Ry. officials have been discussing routes for additional lines. The construction of lines on Bay St. and University Avenue have been agreed upon. The question of the construction of a line to the Island was considered, but no decision has been reached. (June, pg. 429).

Electric Ry. Finance Meetings, Etc.

British Columbia Electric Ry.—The Vancouver city percentage of receipts for June amounted to $1,355, against $650 for June, 1906.

Halifax Electric Tramway Co.—Railway receipts for July, $18,281, against $16,166 for July, 1906.

Huron and Ontario Ry.—There has been deposited with the Secretary of State at Ottawa duplicate of a mortgage dated July 30, between the H. and O.R. Co., and the Trusts and Guarantee Co., Toronto.

Montreal Street Ry.—At the recent session of the Quebec Legislature an act was passed amending the company's charter in several particulars. One of the sections gave the company power to increase the number of its directors from five to seven. G. Caverhill and P. Galibert have been elected by the directors to fill the two additional seats at the Board, which is now constituted as follows: President, Hon. L. J. Forget; Vice-President, K. W. Blackwell; Managing Director, W. G. Ross; other directors: Sir H. Montagu Allan, Lieut.-Col. F. C. Henshaw, G. Caverhill and P. Galibert.

Passenger earnings for July, $328,981.88; total earnings, $339,756.45; against $295,643.76 passenger, and $300,884.57 total earnings for July, 1906. Operating expenses, $175,946.86; rent leased lines, $339.96; city percentage on earnings, $32,070.40; interest on bonds and loans, $18,873.41; contingent for renewals, $16,449.09; surplus, $98,076.73; against, $161,160.75, operating expenses; $25,650.01, city percentage on earnings; $15,180.86, interest on bonds and loans; $14,971.03, contingent for renewals; and $83,921.92, surplus for July, 1906. Rental of leased lines is an extra charge in the current year's accounts. Gross earnings for ten months ended July 31, $2,834,644.35; operating expenses, $1,761,545.18; fixed charges, $457,347.08; surplus, $615,752.09; against $2,494,669.54 gross earnings; $1,528,353.81 operating expenses; $374,810.26 fixed charges; and $591,505.47 surplus for the same period, 1905-06.

St. John Ry.—The company was authorized by an act passed last session of the New Brunswick Legislature, to borrow $300,000 in addition to its present indebtedness and to issue bonds in respect of the same. It was also authorized to increase its capital stock by an amount not exceeding $200,000 with the approval of two-thirds of its shareholders.

Toronto Ry.—Car earnings for July, $300,591.66, against $265,891.73 for July, 1906.

Windsor, Essex and Lake Shore Rapid Ry.—The annual meeting was held Aug. 29, for the purpose of electing directors, making by-laws for various purposes, authorizing the issue of bonds, debentures and other securities, and ratifying and confirming an agreement made May 9, between the company and the Union Trust Co., Toronto, providing for a loan of $150,000 in addition to $450,000 already secured by the company and others to the Union Trust Co.

The Winnipeg Electric Street Ry. Co. has decided to issue an additional $1,500,000 of stock for the purpose of carrying out extensive improvements to its system. The issue will be made to present shareholders in the proportion of one share of new stock for every three of old

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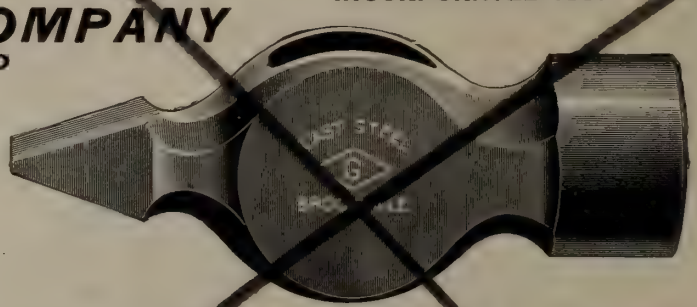

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Electric Railway Notes.

The Halifax Electric Tramway Co. has purchased 600,000 paving blocks in Great Britain for its lines.

W. Phillips, Manager of the Winnipeg Electric Street Ry., returned to that city Aug. 8, after a two months' holiday trip to Honolulu.

H. W. Mills has been appointed examiner of motormen for the Sarnia Street Ry., with the approval of the Ontario Railway and Municipal Board.

F. W. Gitchell, Comptroller B.C. Electric Ry., will, it is announced, be married on Sept. 4, to Miss E. Jackson, the first child born in New Westminster, B.C.

The Winnipeg Board of Control has decided to abandon the city's electric lighting plant and to purchase the necessary current from the Winnipeg Electric Ry. Co., thereby saving 50%.

A commission of electrical experts and railway officials has arrived in New York from Germany to study the systems of electric traction on this continent. During their tour they will visit Niagara Falls and Montreal.

The Montreal Street Ry. Mutual Benefit Association proposes to apply next session of the Quebec Legislature for an act amending its powers, and authorizing the employes of the Montreal Terminal Ry. to form part of the Association.

K. L. Aiken, an electrical engineer who has been looking into the question of the electrolysis of water pipes in Hamilton, Ont., for the City Council, recommends that an endeavor be made to come to an arrangement with the company to remedy the matter, and advises that the two-trolley system or the alternating current system be used instead of the track return system.

The South-Western Traction Co.'s car barns at London, Ont., together with five cars and 20 motors, were destroyed by fire Aug. 10, caused by a crossed wire. The loss is placed at about $125,000, which is fully covered by insurance. The company had four other cars at St. Thomas, which, with one saved from the burning barns, are being utilized on the line. The barns will be rebuilt at once.

As a result of their inspection of the street railway lines at various places in the province the Ontario Railway and Municipal Board will make orders for a number of changes to be made to ensure the greater safety of the public. Expensive changes will not be ordered on the smaller lines, as some of them have financial troubles which, the Commissioners state, cannot be ignored, and it would not always be wise to order changes which the companies could not afford to make.

Judgment has been rendered by the Recorder in the case of the City of Montreal against the Montreal Street Ry., respecting taxes. He finds that the city is entitled to judgment and the company is ordered to pay $29,681.20 as per the City Treasurer's statement of assessments due. The company is also directed to pay interest at 6% per annum, so that the total sum due the city to date is $41,533.59. The action is based upon a valuation roll prepared annually by the city assessors and containing the civic appraisement of all immovable property in the city. The question was, what is immovable property in the city? The company claimed that certain parts of its possessions were not included under this head, and suit was taken by the city to obtain these taxes, which the company declined to pay.

Ex-Mayor Dyke read a paper on Municipal Ownership in the twin cities, at the recent convention of the Association of Canadian Municipalities, in the course of which he pointed out that Port Arthur had the first municipally owned street railway in Canada, when the joint population of the two cities was only 3,000. Ten years later, in 1903, the gross income had reached $156,347.66, and the expenditures, $139,947.17. The net profit to the city since the railway was built was $90,898.38. The debenture debt on the railway and power plant was $352,260. The net profit of the railway during the last four years equalled one-fifth of the entire cost of the road, and from its inception the entire profit of $90,000 equalled one-fourth of the entire cost. He said: "If you add to this profit the value of the franchise, which is estimated at $1,000,000, you have a system created and developed by municipal ownership which any private corporation would be proud of."

A New York technical paper of July 27 contained the following: "Yarmouth, N.S.—The Hood-Godfrey Electric Ry. Co. has secured a franchise from the city council to construct an electric double track railway from Cumberland st. to Cliff st. A terminal is to be constructed at Cumberland st., while shops, power house, etc., will be erected on the Swain property at the other end of the line. A. J. Haines, purchasing agent, is now in St. John, N.B., attending to the supply of ties. The chief engineer has completed surveys. T. W. Carten, President; Jesse C. Robbins, Secretary; S. C. Hood, jr., Treasurer. Work will be started about the middle of September, when contracts will be let." Yarmouth reports state that none of the alleged officers had ever heard anything of the matter until a copy of the paper was shown them. The distance between Cumberland and Cliff streets is stated to be about 300 ft.

A by-law has been prepared for consideration by the Road Committee of the Montreal City Council, authorizing the Montreal Street Ry. to carry freight by electric cars to various points within and beyond the city limits, the company to pay the city 50c. for each carload. The company may construct sidings for loading and discharging freight in the city. The company will also have to water, three times daily, all streets upon which both freight cars and passenger cars are run. The charge for hauling freight will be not more than 35c. a ton. The hours for hauling freight will be from 8 a.m. to 5 p.m., and from 7 p.m. to 6 a.m. The intervening hours will be reserved for passenger service only in view of the heavy pressure of passenger traffic mornings and evenings. The speed of freight cars will be limited to eight miles an hour. The proposition has been under consideration for some time and its favorable consideration was urged upon the city council by the Montreal Board of Trade, the Montreal Builders' Exchange, the Chamber of Commerce and other bodies of business men. The Montreal city press is unanimous in support of the proposal.

The Canadian Electrical Association will meet in Montreal Sept. 11, 12 and 13.

A press dispatch from Ottawa, dated Aug. 26, states that the Board of Railway Commissioners has decided to extend the times at which the following orders shall take effect. No. 3245 of July 4, relating to the use of lignite coal on the railways, from Sept. 1 to Oct. 1, and no. 3239 of July 3, as to the provision of a watchman on wooden trestle bridges during the months of May, June, July, Aug. and Sept. in each year, from Sept. 1 to next year. The dispatch also states that the Commissioners have decided to extend the time to which the Bell Telephone Co.'s present rates shall apply to Nov. 13.

Expansion of Electric Freight Traffic.

By A. S. Atkinson.

In no field of electric traction in cities and suburbs are there more questions deserving special study than those pertaining to the development and expansion of freight traffic. In the steady growth of passenger traffic, the freight side of the subject received but scant attention until a few years ago, and even to-day on many lines little effort has been made to develop freight. Even on those roads which made freight a specialty early in their operation, the business was confined chiefly to carrying the freight produced and consumed along the line of travel, and no thought was given to securing through freight traffic and developing industries which would prove large freight carriers. It was in those days considered somewhat out of the province of the electric to encourage and develop freight service. What might be called the second era of electric traction is now being studied with energy, and the development of the freight service may soon make great changes in the ordinary profits of many roads. There are many questions which are of a purely local nature which enter into the subject, and some of these must be studied in the light of experience with other roads. In regions where iron and coal are the chief freight articles, the trolley roads would have little or no chance unless other kinds of freight could be developed. In the heart of the coal and iron regions of Pennsylvania, however, a number of electrics have worked up a satisfactory freight service through encouraging farmers and small market gardeners to ship their produce.

The development of farming industries by the electrics is well illustrated in a number of roads. Before the Portland, Me., roads were extended to Biddeford and Saco on one side, and to Yarmouth on the opposite side of the city, all the milk was brought over the steam roads, but to-day nearly 50% of the milk within a radius of 10 miles is brought by the electric freight cars. Before the electrics were built practically no milk was produced in this territory, but immediately the farmers entered extensively into the dairy business. The same holds true of fruits and vegetables, and the farm produce shipped over the roads makes a large item in the industry. It is estimated that in the suburbs of large cities about 6,500 gallons of milk are produced per square mile of territory, and this could be greatly increased if proper facilities for marketing the milk could be obtained. The electrics are the best for handling milk on a low freight basis in competition with the steam roads. They pass through more rich farming country than the steam lines and enter more into the heart of the towns and cities. The possibilities of the freight business carried by the electric lines have been better appreciated in the Middle West of the U.S. than in the East. Four years ago the freight traffic of the Eastern Ohio Traction amounted to over $44,000 a year, and in the last few years this has more than doubled. The Cincinnati, Georgetown and Portsmouth road was also carrying nearly $50,000 worth of freight and express, and now carries 40% more. The Toledo and Western, the Lake Shore Electric and the Cleveland and Southwestern were also pioneer developers of freight traffic in this region. In Pennsylvania, the Altoona and Logan Valley, the Harrisburg traction, and the Lehigh Valley traction have been developing freight traffic systematically for the past half-dozen years, and to-day their receipts from this department stand high.

Statistics seem to indicate that the freight-earnings of small steam roads range from $600 to $2,500 a mile of track a year, and after the express matter and products of

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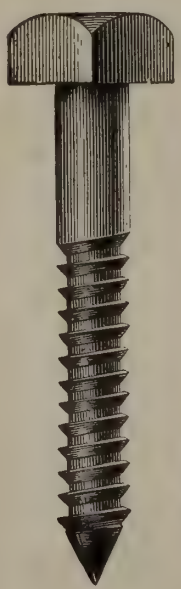

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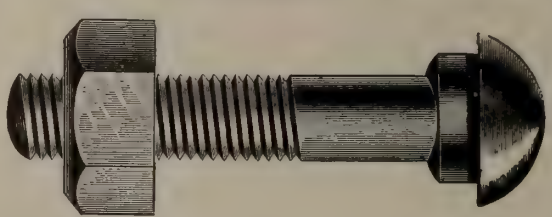

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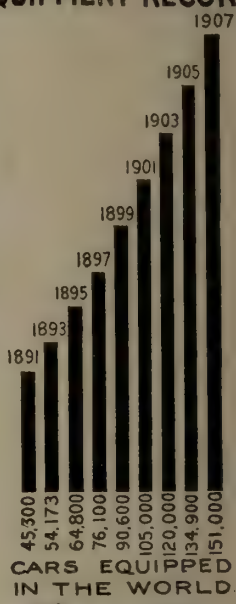

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mines are deducted the average earnings from carrying agricultural products amount to $500 to $750, according to the location of the road and its population. In New York and New England the average production per acre of land is placed at one and a half tons of hay, or half a ton of wheat, or one ton of barley, and one of buckwheat. The transportation of this produce from each acre of land to a market located from five to ten miles would make every square mile of farming land tapped by an electric more profitable than in transporting passengers alone in a sparsely settled region.

In half a dozen roads of the Middle West of the U.S., freight earnings have actually exceeded those from the passenger department. This included express matter and light parcel service. The latter two have been completely monopolized by the electrics, the steam companies having finally yielded to the inevitable and made arrangements with the electrics to distribute light freight and express matter to their destination. It is almost useless for a steam road to enter into competition with the electrics for light freight and express distribution in many sections, The electrics penetrate regions far removed from the steam lines and carry their express and freight to the very doors of the consumers.

On one eastern electric in New York State, which has been in the field of freight traffic for several years, the following figures show the relative value of different kinds of freight: Milk, $3,000; express, $6,000; freight, $33,000; total, $42,000. This road is less than 40 miles long, and runs through a farming region with scattered hamlets and towns. The future of the passenger traffic is good, for the towns are thriving, but the freight traffic at present pays nearly as much as the passenger. The freight has been steadily increased through enterprising efforts to induce manufacturing plants to locate along the route. Through generous freight-rate inducements a canning factory was located in the heart of the farming country, and later a factory for manufacturing light wooden articles. The freight receipts from these two concerns add materially to the profits of the road. There is prospect now of a bleachery locating along the line of the road to take advantage of natural waterpower of a stream, and there is also talk of establishing a shirt factory. If these should be realized the freight traffic would be increased by nearly 40%, and the passenger traffic would increase through the greater population induced to settle there to work in the factories. The two go together so well that the road has recently considered the question of buying cheap land along this route and offering it for sale at nominal prices to manufacturing concerns. Undoubtedly this would pay in time, for there is no steam road to offer competition, and the electric controls the whole business, passenger and freight traffic.

The electrics have led the way in opening up new suburban places by establishing good travelling facilities in advance of population, an enlightened policy which the steam roads formerly never attempted to adopt. Now in a similar manner many of the electrics are leading the way in encouraging the transportation of freight and express at reasonable rates through thinly settled districts, trusting in this way to build up a future of profit. The policy of encouraging the establishment of factories along the route must steadily increase both passenger and freight traffic of a road.

As an illustration of the value of developing the freight traffic of an electric line, the Niagara, St. Catharines and Toronto Ry. fell into the hands of a receiver prior to 1900, and was so utterly mismanaged that its goodwill seemed of little worth. Originally it was a steam road, and its gross annual freight earnings prior to 1900 were less than $20,000. Then a very serious attempt was made to build up a good freight traffic, especially in freight and express of a high class, such as package merchandise. Within a year this effort showed results, and by the close of 1901, there had been a marked gain in freight transported and in profits. The managers began to rouse the dormant trade and stimulate traffic in every possible way. Systematic handling of freight and merchandise resulted in prompt deliveries which pleased the merchants, and more freight was directed to the road instead of going over the Grand Trunk Ry., a natural competitor of the electric. Accommodating patrons proved a better business-getter than rate-cutting, and the energies of the road were devoted to this work. Side tracks or switches were arranged at convenient points where merchants could load the cars at their demand and shipping receipts were given to merchants over the counter so that there was never any question of responsibility. Within two years the old bankrupt road showed an earning of 120% greater than in 1900. Since then the gain has been steady and the freight and express end of the business is chiefly responsible for this. But business has increased in the rural districts through the accommodations afforded the merchants and farmers. To-day the electric delivers loaded cars on switches to and from the G.T.R. and merchants along the route of the electric can thus send goods straight through to any point.

In the recent reports of the leading railways of the U.S. it is shown that the income from the passenger service performed by the steam lines is only about one-fifth of the total income earnings, while the receipts from the freight amounts to seven-tenths and the balance is covered by express earnings. In leaving the steam roads to carry most of the freight and express in the past the electrics have ignored the most profitable part of the carrying trade, and kept for themselves the least profitable. The growth of towns and rural communities has moreover been more dependent upon the cheap and efficient transportation of freight and express matter than upon the passenger service. Good freight accommodation stimulates the growth of business and induces manufacturers to settle along the line. Population follows manufacturing and industrial growth rather than the reverse. Every manufacturing plant requires the services of a certain number of workmen whose families quickly build up a small community. The electrics then in developing a new region can secure quicker results.

Canadian Street Railway Association.

A meeting of the Executive Committee was held at Ottawa, Ont., July 31, the President, E. A. Evans, General Manager and Chief Engineer Quebec Ry., Light and Power Co., in the chair. At the annual meeting at Windsor, Ont., in June, A. H. Royce, President Toronto Suburban Ry., having been appointed Counsel to the Association, declined re-election to the Secretary-Treasurership, and the election of his successor was delegated to the Executive Committee which, at its Ottawa meeting, unanimously elected Acton Burrows, Managing Director of the RAILWAY AND MARINE WORLD, to the position. It was decided to hold a special general meeting of representatives of member companies of the Association, at Montreal Sept. 12 and 13. There will be no set papers read at this meeting, but the representatives have been asked to send to the Secretary-Treasurer a list of subjects they would like to have discussed and of questions to be answered, and these will be classified and a series of topical discussions will be held.

The members of the Executive Committee attending the meeting were entertained at luncheon and at dinner at the Rideau Club by J. D. Fraser, Secretary of the Ottawa Electric Ry., and in the afternoon they visited Britannia-on-the-Bay as the guests of the company, and viewed the regatta from on board the company's steam launch, accompanied by T. Ahearn, President; J. D. Fraser, and J. E. Hutcheson, Superintendent and Purchasing Agent of the Ottawa Electric Ry. Co., which has spent a very large sum in providing a most attractive park, pier, and various accessories there.

Grain Elevator Notes.

J. B. Jackson's grain elevator at Simcoe, Ont., was burned Aug. 2. It was empty at the time.

A third elevator is being erected at Asquith, Sask., the present terminus of the extension of the Manitoba and North-Western Ry.

The Montreal Harbor Commissioners are installing conveyors at a cost of about $500,000, to carry grain from their elevator to the steamship berths.

The Cupar Farmers' Elevator Co. has been incorporated at Regina, Sask., under Northwest Territories ordinance respecting joint stock companies.

The Montreal Harbor Commissioners' elevator is reported to be in danger of collapse. Large cracks have appeared in the structure, due, it is said, to a settling of the foundation.

The grain handled at the Kingston, Ont., elevators for the season of navigation to July 31, totalled 7,346,803 bush., against 5,828,201 for same period, 1906, and 1,759,308 for same period in 1905.

The Dominion Elevator Co's elevator at Hamiota, Man., was burned to the ground Aug. 2. About 1,200 bushels of grain were destroyed. The elevator was erected about 16 years ago, and the loss is estimated at $20,000.

Up to July 31 the quantity of grain arriving at Kingston, Ont., elevators from the west, for transhipment to Montreal, totalled 6,718,000 bush., an increase of 25% over the quantity handled to the same date in 1906.

The Prince Rupert Timber and Lumber Co., recently incorporated under the British Columbia Companies' Act, is authorized to construct and operate grain elevators and flour mills. E. H. Moore, Vancouver, B.C., is its attorney.

The Beaver Elevator Co., Ltd., has been incorporated under the Dominion Companies' Act, with a capital of $99,000 and offices at Winnipeg, for the purpose of carrying on the business of grain buyers, grain elevator owners and warehousemen; to construct elevators, and to own and operate piers, docks, wharves, etc., in connection therewith. The provisional directors are: D. Morrison, W. Stead, K. Murray, J. H. and E. T. Leech, Winnipeg.

The number and capacity of licensed elevators and warehouses in the Manitoba grain division, comprising the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, with Ontario terminals on the C.P.R., C.N.R., Midland Ry. of Manitoba, Brandon, Saskatchewan and Hudson's Bay Ry., and the Alberta Ry. and Irrigation Co.'s lines, are:

	Elevators.	Warehouses.	Capacity, bushels.
C.P.R.	917	32	28,538,200
C.N.R.	275	20	7,485,000
M.R. & B.S. & H.B.Ry.	13	..	365,000
A. Ry. & I. L.	7	..	209,000
C.P.R. Ont. terminals	7	..	11,625,000
C.N.R. Ont. terminals	2	..	7,000,000
Totals	1,221	52	55,222,200

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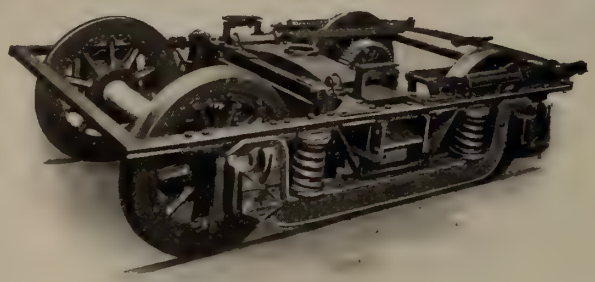

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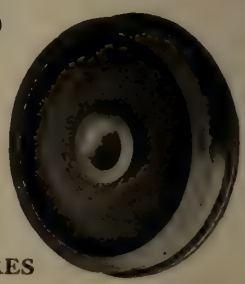

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LEYLAND LINE
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Sailing from Boston Wednesdays.

RED STAR LINE
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Sailing from New York Saturdays.

WHITE STAR LINE
New York—Liverpool—Queenstown—
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N.Y.—Plymouth—Cherbourg—Southampton
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Boston—Queenstown—Liverpool
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MARINE DEPARTMENT.

Atlantic and Pacific Ocean Marine.

Press reports indicate that the Allan Line may institute an Oriental steamship service in conjunction with the G.T. Pacific Ry.

It is stated that the Union Steamship Co., New Zealand, has ordered a 16½-knot steamship for the Australian-Vancouver mail service.

It is reported that Capt. Outram is to be the commander of the Allan Line new S.S. Grampian, and that he will be succeeded on the Pretorian by Capt. Main.

Press reports state that three steamships are under construction for Alfred Holt & Co., owners of the Blue Funnel Line, and will be put on a route between the Orient and Puget Sound.

The steamboat Micmac, owned by J. W. Carmichael & Co., New Glasgow, N.S., while on a voyage from St. John's, Nfld., to Liverpool, Eng., ran ashore near Broad Cove, Nfld., Aug. 13.

A Vancouver despatch states that the C.P.R. has sold its coast steamships Tartar and Athenian to the Japanese Government, and will replace them by the trans-Pacific freight steamships Montrose and Monterey.

The cases in which the C.P.R. steamships Empress of China and Tartar have been found guilty of smuggling Chinese, and for which they may be liable to an aggregate fine of $21,000, are, it is reported, being appealed in Ottawa, Ont.

Capt. Nunan, of the Allan Line S.S. Ionian, has been presented with a silver cup, and the officer in charge of the rescuing boat with a bronze medal, by the Norwegian Government, for the rescue of a Norwegian vessel's crew off the banks of Newfoundland.

The propelling machinery for the S.S. Alberta, which is being built at Belfast, Ireland, for the Dominion Line, will consist of two sets of quadruple expansion engines, and one low pressure turbine. The Alberta is expected to be ready for service in June, 1908.

Experiments with an ice code, invented by Capt. Logan of the Furness-Withy line, have been made on the Manchester liners, and have proved successful. The code is regarded as of great value in communicating with vessels taking the northern route as to the condition and position of the ice.

Regarding the press reports from Montreal, that the Donaldson and Thomson Lines are contemplating the addition of another fleet of passenger steamers to cope with the increased traffic between Canada and Great Britain, we are officially informed that the principals know nothing of the report published.

Sir Wm. Van Horne has according to press reports been in conference with the Dominion Premier, on the question of the proposed "All-Red Line" between Great Britain and the Orient, via Canada. It is stated that the establishment of such a line would seriously affect steamship companies already running between these countries.

It is reported that chief amongst the new steamships which the C.P.R. contemplates putting on its various routes in the near future is one, of the Empress type, for the Pacific Ocean mail service. It is stated that the plans for this vessel are in course of preparation, and that she will be larger and faster than any of the vessels at present owned by the company.

The North American Wrecking Co. has a number of men engaged in salvage operations on the Allan Line S.S. Bavarian at Indian Cove, Quebec. The Bavarian stranded at Wye Rock, Oct., 1905, and was raised and floated to Indian Cove in the fall of 1906. It is understood that an effort is to be made to repair the vessel and tow her to New York for complete repairs.

The various steamship companies which deal with the passenger traffic from Great Britain, are realizing that there has been a considerable increase in the number of passengers booking second class, and are taking steps to meet the demand. In most of the boats recently launched, and in those now building and to be built, increased accommodation is being provided for second-class passengers.

The Weir Line S.S. Foreric, the first of a new line of steamers to run between Australia and Victoria, B.C., arrived in that port early in August with a cargo of Australian coal, and has taken lumber on her return trip. The new line is at present essentially a freight one, but if sufficient inducement offers, the owners will, it is stated, either alter existing vessels or build new ones, so as to be in a position to compete with other lines for passenger traffic.

A number of Irishmen resident in Quebec, Montreal, Ottawa and Toronto, presented a handsome clock to the C.P.R. S.S. Empress of Ireland, Aug. 8. It was accompanied by the following address to Sir Thos. G. Shaughnessy, President C.P.R.: "Please accept this clock, presented to the Empress of Ireland, as a small token of esteem and affection from the subscribing Irishmen of Quebec, Montreal, Ottawa and Toronto, to a fellow-countryman who has shed such lustre on our race and rendered such distinguished services to Canada."

A proposal is reported to have been made for the operation of a line of steamships across the Atlantic, in connection with the "All-Red Line" plans suggested at the Colonial Conference by Sir Wilfried Laurier. The company asks for a subsidy of $2,500,000 a year. The cable further states that the Canadian Government has offered to pay one-half of the subsidy. Lord Strathcona had a second conference with Sir Wilfrid Aug. 8, in regard to the proposal. While nothing has been announced as to the views of the Imperial Government upon the proposals, it is of interest to note that the Irish Piers and Railways Bill, under which it is proposed to construct a pier, etc., at Blacksod Bay, Ireland, has been passed.

The C. P. R. trans-Atlantic steamships have recently been carrying Quebec freight on to Montreal, and delivering it into Quebec by rail, the reason given being that labor troubles have reached such a state in that city that it is impossible to get sufficient longshoremen and those offering demand excessive pay. A committee appointed jointly by the Quebec City Council, Harbor Commission and Board of Trade was appointed July 31, to confer with the C.P.R. and the Ship Laborers' Society with a view of arriving at a satisfactory solution of the points of difference. The first meeting of the committee was held Aug. 8, when it was decided to invite the C.P.R. and other steamship owners to make a statement of their grievances, and to ask the Ship Laborers' Society to state its case.

Statements attributed to H. C. Thompson, the promoter of the proposed company which was to run a quick service between England and Newfoundland, via Ireland, who recently arrived in Canada on a visit, lead to the belief that the original scheme will be dropped. It was proposed to ship passengers across the channel to Ireland, thence across Ireland by rail to Killery Harbor, where they would embark. At the Newfoundland end a 20-knot boat was to run between Bay of Islands and Gaspe Bay, Que. This scheme, it is said, has been found to be impracticable, and it is now proposed to make Bristol the English port, and to run the Newfoundland boat between Goose Arm, Bay of Islands, and Sydney, N.S. The St. John's (Nfld.) Daily News in commenting on the matter says: "The probabilities of the scheme ever attaining shape do not appear to be greatly enhanced."

Maritime Provinces and Newfoundland.

S. McCormick has been appointed harbormaster at Weymouth, N.S.

C. A. Hutchins, Superintendent of Lighthouses for Nova Scotia, died at Halifax, N.S., July 20, aged 62.

Alexander Fraser, formerly captain of the Pickford-Black S.S. Ocamo, died at Camden, N.J., July 21, aged 54.

E. H. Lovitt, master of the barque Englehorn of Yarmouth, N.S., died recently at Hamburg, Germany, aged 64.

J. E. Furness, Manager of the Furness-Withy lines at Halifax, N.S., has been elected a director of the company.

The crews of the Cumberland Ry. and Coal Co.'s barges have been paid off owing to the miners' strike at Springhill, N.S.

H S. Crane, travelling agent of the Plant S.S. Line, Halifax, N.S., was married to Miss M. Thompson, at Boston, Mass., Aug. 9.

The Norwegian S.S. Freysdal, bound to Halifax, N.S., was wrecked on Western Malcolm ledges, off the coast of Maine, U.S. Aug. 9.

The barque Low Wood was badly damaged in a collision with the steamboat Prince George from Boston, in Yarmouth Harbor, N.S., recently.

The S.S. Wanda, while assisting in removing cargo from the wrecked S.S. Orinoco near Cape Sable, fouled the latter's anchor, tearing a hole in her side.

The S.S. Senlac, which was beached after colliding with the S.S. Rosalind in July, has been successfully floated and towed to Halifax, N.S., for repairs.

A ferry boat, to run between Froude Point and Lockeport, N.S., was launched at Lockeport recently, and towed to Yarmouth for the installation of machinery.

The steamboat Universe, at present in dry dock at Halifax, N.S., is to be repaired at a cost of about $60,000. A contract for this work has been awarded by the underwriters.

Plans for a seamen's institute for St. John, N.B., have been completed, and it is hoped to get the building sufficiently far advanced to afford accommodation before winter sets in.

Department of Marine officials held an investigation at Yarmouth, N.S., Aug. 15, into the collision between the Dominion Atlantic Ry. S.S. Prince George and the barque Low Wood.

The time within which the Imperial Dry Dock Co. of St. John may construct its dock at St. John, N.B., was extended to May 1, 1908, last session of the New Brunswick Legislature.

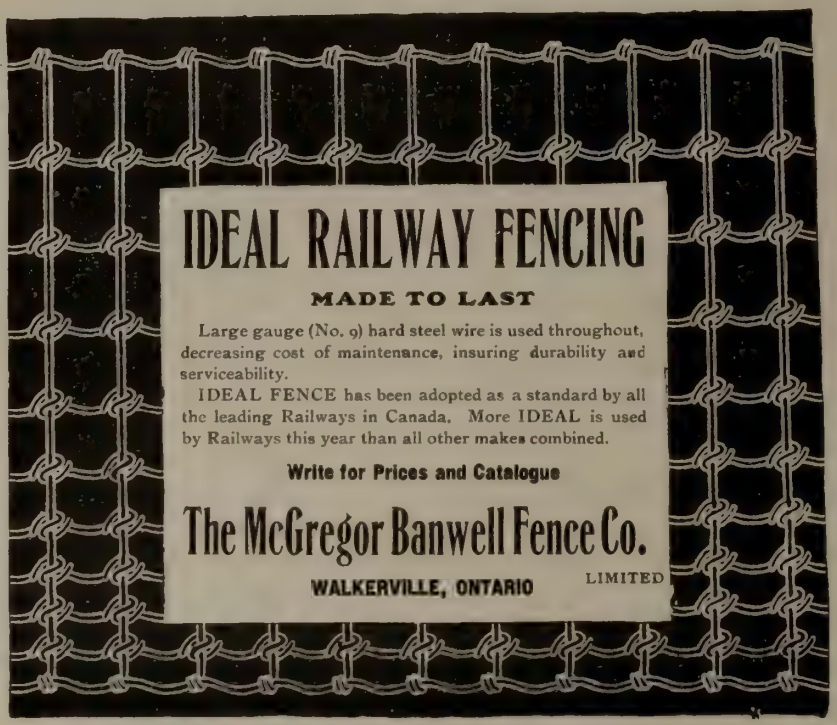
An order-in-council has been passed declaring that Glace Bay, N.S., is a port to which the provisions of the act relating to port wardens shall apply, and appointing W. Phalen to that office.

Wm. Thomson & Co., of St. John, N.B., have chartered the Norwegian S.S. Active to replace the Senlac on the South Shore route, until the necessary repairs to the latter have been completed.

The steamboat Beatrice, which went ashore at Cranberry Head last year, and which was afterwards floated and beached at North Sydney, has been pumped out and taken to Pictou, N.S., for repairs.

D. J. Purdy, St. John, N.B., sailed for England recently on the Empress of Ireland, for the purpose, it is stated, of purchasing a vessel to replace the Crystal Stream, recently destroyed by fire.

The New Brunswick Legislature at its recent session voted the following sums in the interests of the marine services of the



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Calgary, Alta.		Winnipeg, Man.

THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

province: $14,000 to provide for steam navigation; $8,000 to provide for public wharves.

J. F. L. Parsons, of the Marine Department, has held an enquiry into the recent collision between the Senlac and the Rosalind, in which the former was so badly damaged that her owners abandoned her to the underwriters.

J. Thompson, a well-known captain on the eastern line between St. John, N.B., and U.S. ports, died at Portland, Me., Aug. 9. He was over 80 years of age, and was the commodore of the International Steamship Co.'s fleet.

An enquiry into the stranding of the schooner Wandrian, at Little River, Me., on Dec. 27 last, has been held by J. G. Riley, of the Marine Department, acting Wreck Commissioner. It is understood that the insurance companies question their liability.

A schooner named Kenneth C. has been launched at Port Greville, N.B., and will be chiefly used in the lumber trade between New Brunswick and U.S. ports. She is 162.2 ft. long, 35.4 ft. wide, 12.9 ft. deep, and 475 tons register, and is fitted with steam hoisting gear.

Capt. A. Dickson, A. Macpherson, H. Bigelow, C. Mackay, and Capt. M. Turner, have been appointed Pilotage Commissioners for the district of Glace Bay, N.S.; S. Harding, measuring surveyor of shipping at Yarmouth, N.S., and G. Tait, port warden for Chatham, N.B.

While engaged in survey work on the Labrador coast recently, the steamboat Ellinor struck an uncharted rock in Eskimo Bay. She has been docked for repairs. After completing her season's survey work she will be sent to Halifax, where during the winter new boilers of larger capacity are to be installed.

The S.S. Orinoco of the Pickford-Black West India Line, ran ashore on Seal Islands, near Cape Sable recently, in a dense fog, and became a total wreck. She was built at Flushing in 1888, and registered at London, Eng. in 1901, under the name Bromo. Her dimensions were: length, 319.9 ft.; breadth, 36.7 ft.; depth, 23.2 ft.; tonnage, 2,486 gross, 1,550 register. She was chartered from the Elder-Dempster Co. about three years ago.

Leave has been granted to the Pilot Commissioners for St. John, N.B., to appeal against the judgment of the New Brunswick Courts, subsequently confirmed by the Supreme Court at Ottawa, in the action brought by the Cumberland Ry. and Coal Co., for the return of pilotage fees. The company owns several barges which are towed from place to place, and on these the St. John Pilotage Commission collected the regular fees for pilotage. The company paid the fees under protest, and subsequently after a decision of the Quebec courts entered an action to recover the amounts paid. The case will now go to the Imperial Privy Council.

The Gloucester Navigation Co., which was incorporated by an act passed last session of the New Brunswick Legislature, is authorized to operate one or more steamboats for passengers and freight on the Baie des Chaleurs, touching at any point at Caraquet, Lower Caraquet, Shippegan, Lameque, Petite Lameque, Petit Shippegan, Miscou and other points along the said route, and to acquire such wharves, warehouses, etc., as may be necessary. The capital is fixed at $40,000, and the offices are to be provisionally at Caraquet, N.B. The first directors are: P. P. Morais, C. L. Robichaud, H. Duguay, P. Luce, W. P. Foley, A. Sormany, E. Chiasson. The company is given three years to get its business organized and a steamboat on the route.

Province of Quebec Marine.

The Dominion Government S.S. Montcalm will run between Quebec and Anticosti Island during the winter carrying mails.

A new steam tug, the Beaumont, has arrived at Montreal from Glasgow, Scotland, where she was built. She is 58 tons gross.

J. O. Poliquin, for the past ten years Secretary-Treasurer of the Sincennes-McNaughten Co., Montreal, died there Aug. 16, aged 53.

The ferry boat Valeria, of Morrisburg, Ont., has been bought by B. Crapaud, Montreal, and will be run between that city and Mouch-a-Feu, Que.

The Montreal Harbor Commissioners have engaged an engineer from London, Eng., to advise them regarding several contemplated improvements to the port.

The steamboat Orion, owned by the Quebec Transportation and Forwarding Co., Quebec, was reported ashore, Aug. 17, on Calf Island, Lake Ontario, while bound to Oswego, N.Y., with pulp wood.

The name of the Dominion Government steamboat Deerhound, official number 109,680, registered at Quebec, has been changed by order-in-council to that of Lady Evelyn. She is used to transfer mails at Rimouski, Que.

Ontario and the Great Lakes.

A. Monteith has been appointed Dominion Government wharfinger at Rosseau, Ont.

The steamboat Arabian, which went ashore in St. Francis Lake, has been released without damage.

Mrs. Durnan, wife of Geo. Durnan, for many years keeper of Toronto lighthouse, died at Toronto, Aug. 17.

C. Virtue, lock laborer Rideau Canal, has been awarded the Imperial Service medal for long and meritorious service.

The steamboat Packard, which was sunk last year in Pigeon Bay, Lake Erie, between Pelee Island and the main land of Essex County, Ont., is to be raised.

The Niagara Navigation Co.'s steamboat Cayuga was dry-docked at Kingston recently for the purpose of having longer blades fitted to her propellers.

The steamboat City of Grand Rapids, which went ashore on Manitoulin Island recently, has been floated without any apparent damage having been sustained.

The steamboat Gunion, loaded with hay and tomatoes for the U.S., sprang a leak and sank in 300 ft. of water at South Bay, Prince Edward County, Ont., Aug. 16.

The steam barge Montpelier, one of the pioneer wooden vessels of the Great Lakes, while bound for Sarnia, Ont., with a cargo of coal, recently sprang a leak, and sank.

The Dominion Department of Public Works will receive tenders to Oct. 10, for the construction of section 1 of the Ontario-Rice Lake division of the Trent Valley Canal.

The S.S. H. M. Pellatt, while en route to Montreal, ran aground, Aug. 20, near Kingston, Ont., and was subsequently released by the Donnelly Salvage and Wrecking Co., Kingston.

It is reported that the surveys for the proposed canal from Lake Erie to the Ohio River have been completed, and that the work of construction will be commenced in the spring.

The small wooden steamboat Benton has been sold for the second time this year. Her latest purchaser is located at Toledo, O., but the vessel will be used in the Georgian Bay lumber trade.

The coroner's jury in rendering their verdict regarding the death of W. H. Munce, killed by a boiler explosion on the tug Gilbert at Fort Erie recently, blamed the captain for not having a competent engineer on board.

L. Charbonneau, one of the oldest of the upper lake captains, recently died at Mount Clemens, Mich., aged 75. He was born in Quebec, and was the first man to sail a steamboat out of the Clinton river into Lake St. Clair.

The Muskoka Lakes Navigation and Hotel Co.'s new twin screw steamboat has been launched at Gravenhurst, Ont. She was christened Cherokee by Miss B. Phillips of Toronto, daughter of the President of the company.

The acting Dominion Minister of Public Works has promised that the construction of the island breakwater in Toronto harbor shall be proceeded with. The contract was let two years ago, but up to the present nothing has been done.

The Dominion Government is having a chart prepared of the Rideau Canal, and the lakes which are connected up by it, so as to form a water route between Kingston and Ottawa. The Department is providing 40 lights at different points on the route.

We have been advised that the reports that the Richelieu and Ontario Navigation Co.'s steamboat Toronto is to be lengthened, after being taken off the route for the current season, are somewhat premature. The question, however, is under consideration.

The U.S. Lake survey reports the stages of the lakes during July as follows:

	Feet above mean tide at New York.		
	1907.	1906.	1895.
Lake Superior	602.75	602.90	602.90
Lake Michigan	581.54	581.44	580.07
Lake Huron	581.56	581.45	580.16
Lake Erie	573.31	572.64	571.46
Lake Ontario	247.14	246.76	244.53

A lighthouse has been erected in the Kawartha Lakes, on the western shore of Clear Lake, near Young's Point. This is one of a number which the Government purposes erecting on the Trent Canal route. It is also proposed to erect one at the head of Clear Lake.

The name of the steamboat Van Woodland, official number 107,708, registered at Toronto, has been changed to Highland Belle; and that of the steamboat Wissahickon, official number 117,084, registered at Collingwood, Ont., has been changed to Wasaga, by order-in-council.

It is reported at St. Catharines that the Niagara, St. Catharines and Toronto Navigation Co.'s steamboat Garden City, now running between Toronto and St. Catharines, will be lengthened and re-engined, but we are advised that the matter has not yet been decided upon by the owners.

The steamboat Nevada of the Canadian Lake Line, on her way from Toronto to Montreal, ran aground near Farran's Point recently. Mariners say that the spot where the accident occurred is the worst on the whole trip, and at times it is almost impossible to avoid running aground there.

As a result of a visit paid to the principal harbors on the Georgian Bay, by the Deputy Minister of Railways and Canals and the Engineer of Public Works, a commission has been appointed to investigate and report upon the needs of these ports. The report is to be laid before Parliament next session.

The steamboat Pollux is said to be the first boat to carry lumber so far inland as Lake Erie from the seaboard. She was on her way to take up the carrying of grain on the Great Lakes during the season, and had a ballast cargo of about 860,000 ft. of spruce from St. John, N.B., consigned to Tonawanda, N.Y.

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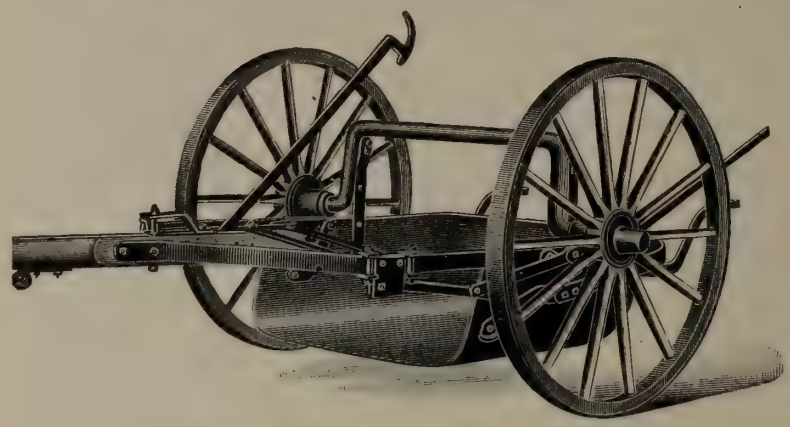

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The Gulf of Mexico
The Pacific Coast
The Great Lakes

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BOSTON, MASS.

The Rainy River Navigation Co.'s passenger steamboat Keenora left Kenora, Ont., Aug. 10, for Rainy River, arriving there April 13. She experienced tempestuous weather on the trip, having to shelter under one of the islands in the lake, and was further delayed by the low water at the mouth of Rainy River.

Press reports to the effect that the Richelieu and Ontario Navigation Co. has placed an order for a sister ship to the Rapids King, to be named Rapids Queen, are, we are advised, incorrect. The matter has been under the consideration of the Board, but it is more than doubtful if the order will be placed at present.

The former Spanish gunboat Don Juan de Austria, while on her way through the Welland Canal, to take up her station as a naval militia training ship at Detroit, Mich., did $150 worth of damage to the canal, and was held by the Canadian authorities at Port Colborne for some hours until the amount of the damage was paid.

The Beaty Lumber Co., which has been incorporated under the Ontario Companies' Act, with a capital of $100,000 and offices at Toronto, is authorized to own, charter, lease or hire vessels in connection with its lumber business. The provisional directors are: M. Macnair, J. P. Beaty, and Mrs. C. B. Macnair, Toronto.

On account of the number of lights in use by contractors on their drills and dredges, the official lights at Lime Kiln Crossing have been changed as follows: north or upper lightship from present two white lights to two fixed red lights, one above the other, the upper light to be 15 ft. and the lower light 12 ft. above the water.

H. Shelters, who was one of the crew of the Bannockburn, which left Fort William, Ont., for Lower Lake points, some years ago, and was never heard of since, has returned to his home in St. Catharines, Ont. He missed sailing in the vessel, went to the U.S., and never communicated with his friends, who believed he had been drowned with the rest of the crew.

An order was issued from Osgoode Hall, Toronto, removing the stay of execution previously granted, pending an appeal in the case in which Johnson & Higgins, marine insurance brokers, New York, obtained judgment for $14,824.79 and costs for premiums of insurance on the steamboat Turbinia during the winter of 1905-06, while she was chartered by the Canada-Jamaica Steamship Co.

The S.S. Keewatin, the second of the new vessels which the C.P.R. is adding to its service on the Great Lakes, has been launched at Glasgow, Scotland. The Keewatin is a sister ship to the Assiniboia, a description of which was given in our last issue. After crossing the Atlantic, she will be divided amidships, for passage through the canals to the Great Lakes, where the two sections will be rejoined.

The tug Shanly, until recently engaged in Government work, has been purchased by the Parry Sound Lumber Co., and will be used for towing lumber. She was built at Ottawa, Ont., in 1890, registered no. 107,081, in the name of the Minister of Railways and Canals. Her dimensions are: Length, 60½ ft., breadth, 15¼ ft.; depth, 6½ ft.; tonnage, gross, 40 tons; register, 19 tons, and is driven by a screw with engine of 25 n.h.p.

During the recent annual inspection of the Toronto harbor by the Board of Harbor Commissioners, J. G. Sing, Government Engineer, submitted plans of the proposed new western channel. The depth to be provided is about 25 ft., with an increased width over the present channel of about 46 ft. If the plans are approved, the work on the new channel will not interfere with the traffic in the present channel.

The Western Navigation Co. has been incorporated under the Ontario Companies' Act, with a capital of $500,000 and offices at Fort William, Ont., to acquire steam and other vessels, and to carry on the business of carriers by water, shipowners, warehousemen, wharfingers, lightermen and forwarding agents, with all necessary and incidental powers. The provisional directors are: J. Murphy, W. C. Lillie, H. McK. Piper, C. H. Jackson, P. J. Manion, Fort William, Ont.

The James L. Burton & Son Lumber Co. has been incorporated under the Ontario Companies' Act, with a capital of $200,000 and offices at Barrie, Ont., with power, among other things, to carry on business as shipowners and carriers by land and water. The provisional directors are: J. L. and F. L. Burton, W. H. Walker, F. C. Lett and A. Alexander, Barrie, Ont. The company takes over the businesses heretofore carried on by J. L. Burton in Barrie, and elsewhere in Ontario.

The Toronto Ferry Co.'s steam ferry Shamrock was totally destroyed by fire, at her moorings, Aug. 6. The company's waiting-room was also destroyed, and the wharf badly damaged. The Shamrock was built at Oakville, Ont., in 1885, and her dimensions were: length, 103.2 ft.; breadth, 24 ft.; depth, 35.4 ft.; tonnage, 144 gross, 101 registered. She was a paddle steamer driven by an engine of 50 h.p. The wharf and buildings are owned by the City of Toronto and leased to the Ferry Co. It is reported that the company will at once place orders for two additional ferry steamers.

The Spanish River Navigation Co. has been incorporated under the Ontario Companies' Act, with a capital of $40,000 and offices at Massey, Ont, to carry on all or any of the businesses of ship, vessel, tug, lighter and barge owners, warehousemen, dockowners, wharfingers, carriers and produce and general merchants; to buy, sell, build, charter, operate, repair and deal in ships, vessels, tugs, lighters, barges, coal and other goods, merchandise and things as may be deemed expedient. The provisional directors are: J. Errington, H. Sadowski, J. Sheets, I. Nellickes, J. S. Low, J. B. Andrew, H. F. Williams, Massey, Ont.

The Wiarton Steamboat Co., Ltd., has been incorporated under the Dominion Companies' Acts, with a capital of $20,000 and offices at Wiarton, Ont., to carry on the business of the transportation of passengers and goods by land and water; the business of towing, wrecking and salvage; to own and operate steamboat lines; to buy and sell vessels of all kinds; to build, repair and design vessels of all kinds; and more particularly to purchase from W. Gillies and J. W. S. Rutherford, the steamboat City of Grand Rapids, which it is proposed to have renamed Wiarton. The provisional directors are: W. Gillies, St. Edmund tp., Bruce county, Ont.; J. W. S. Rutherford, J. J. Acres, W. H. B. Spotten, T. C. Allen, Wiarton, Ont

The Dominion and Ontario Governments have arrived at an agreement whereby the Dominion takes over all the locks, dams, rights in waters, and flooded lands owned by the Provincial Government along the Trent Valley Canal. The Dominion agrees to keep the works in repair and good condition, and pledges itself to pay the Province at the rate of 50c. an acre for any unpatented lands which may be flooded by the construction of reservoirs, and to compensate private owners also, with the provision that in case it is impossible to arrive at a settlement the dispute shall be referred to the Exchequer Court for decision. It is further provided that all mines and minerals on unpatented lands taken over and flooded in the course of the construction of reservoirs, shall be preserved to the Province; and that all mines and minerals on patented lands are to remain the property of the patentee until a proper compensation be granted therefor.

The figures given below showing amounts spent by the Dominion Government on harbor improvements during the past 15 years, and the nine months ended Mar. 31, were placed before a meeting of the Special Improvement Committee of the Toronto City Council recently. The return does not show any expenditure for Toronto, but the Government has recently granted $50,000 for the improvement of the western harbor there:

	Fifteen years ended June 30, '06	Nine months ended Mar. 31, '07.
Montreal	$ 853,598.07	$ 18,229.82
Brockville	.....	.....
Prescott	7,666.58	.....
Kingston	65,066.10	.....
Cobourg	47,451.27	1,955.29
Port Hope	60,465.21	3,259.49
Collingwood	587,382.54	123,073.88
Owen Sound	245,442.33	15,220.34
Port Arthur, Ft. William	376,877.11	69,393.41
Kaministiquia River	471,479.60	145,944.59
Midland	183,129.03	69,932.66
Total	$2,898,557.84	$447,009.48

At a meeting of the council of the Canadian Manufacturers' Association held in Toronto, Aug. 16, it was decided to appeal to the Railway Commission in the matter of freight car weights. It was alleged that a shipper has to pay freight on the railway companies' weights, which are sometimes higher than his own weighing figures. The manufacturers suggest the appointment of a government weigh master.

In the matter of the winding up of William Petersen, Limited, in the Bankruptcy Court, Newcastle-on-Tyne, England, a third dividend of 4d. in the pound has been declared, making altogether 3s. 4d. in the pound. The receipts amounted to £14,903 4s. 3d., which includes £11,250, the company's proportion of the amount recovered in the action against Armstrong, Whitworth & Co., with respect to the projected steamship line between France and Canadian ports. After paying the costs of liquidation, preferred creditors and the dividends, there is a balance on hand of £606 19s. 1d. The Official Receiver states that several matters have unexpectedly delayed the closing of the liquidation, but a final dividend is expected to be paid very shortly.

CANADIAN PACIFIC RAILWAY COMPANY

NOTICE TO SHAREHOLDERS

The Twenty-sixth Annual Meeting of the Shareholders of this Company for the election of the Directors to take the places of the retiring Directors, and the transaction of business generally, will be held on WEDNESDAY, THE SECOND DAY OF OCTOBER NEXT, at the principal office of the Company at Montreal, at twelve o'clock noon.

The Common Stock Transfer Books will close in Montreal, New York and London, at 1 p.m. on Saturday, August 31st. The Preference Stock Books will also close at 1 p.m. on Saturday, August 31st.

All books will be re-opened on Thursday, October 3rd.

BY ORDER OF THE BOARD.

CHARLES DRINKWATER,
Secretary.

Montreal, August 12th, 1907.

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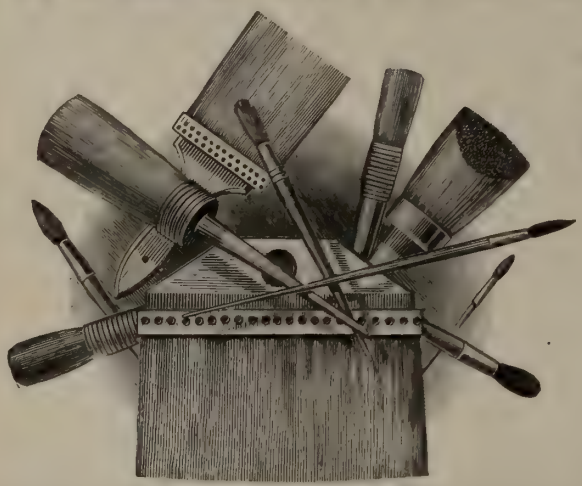

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The Department of Public Works has undertaken the work of improving the navigation of the Athabasca River. A gang of men, taking with them a quantity of machinery, left Edmonton, Alta., July 27, for Lesser Slave Lake, to begin work.

The Southern Alberta Navigation Co. is the title of the company which was formed at Medicine Hat, Alta., for the purpose of operating a passenger and freight steamboat on the Saskatchewan River between Medicine Hat and Lethbridge. The company had a steamboat named the City of Medicine Hat, built there at a cost of about $23,000, but we are informed that it has been found that the river is only navigable for about 80 miles, and that the business done has not been profitable. The company has been considering the advisability of selling the steamboat. The officials of the company are: President, W. Cousins; Secretary-Treasurer, W. J. McLean; Captain, H. H. Ross.

B.C. and Pacific Coast Marine.

The Boscowitz Steamship Co. has purchased the British steamboat Vadzo for its trade on the B.C. coast. She is on her way out from Liverpool to Victoria.

The steamboat Princess Ena, which is being built in Great Britain for the C.P.R. Pacific coast service, is reported to be expected to reach Vancouver in September.

The Burrard Steamship Co., Ltd., has been incorporated under the British Columbia Companies' Act, with a capital of $50,000 and offices at Victoria, B.C., to carry on a general navigation business.

The White Pass and Yukon route is advising shippers to get their goods forward as early as possible, as there are indications of an early closing of navigation there this season, on account of low water.

The Dominion Government has been asked to grant an appropriation in aid of removing obstructions to navigation in the upper reaches of the Fraser River. The promoters of the memorial propose to have a special steamer constructed for the navigation of the river from Quesnel.

The C.P.R. is asking tenders from shipbuilders on the Clyde, Scotland, for the construction of a 20 knot steamboat, for its Pacific coast service. It is said that the vessel will be of the same type as the Princess Victoria, but larger; that she will be 340 ft. long, with 30 ft. beam, and with capacity for 1,500 passengers.

The Prince Ruperts' Timber and Lumber Co., Ltd., has been incorporated under the British Columbia Companies' Act, with power among other things to own and operate steam and other vessels for any purposes of the company. The capital is $450,000; the officers are at Vancouver and the company's attorney is E. H. Moore, Vancouver.

The G. H. French Tug Boat Co., Ltd., has been incorporated under the British Columbia Companies' Act, with a capital of $100,000, for the purpose of acquiring and carrying on the business now carried on at Vancouver under that name, as owners of tugs and scows; to purchase steam and other vessels and to carry on a general navigation and forwarding business.

The British Coast Steamship Co., Ltd., has been incorporated under the British Columbia Companies' Act, with a capital of $100,000, to carry on a general navigation business and other businesses in connection therewith. Power is given to construct at Victoria or elsewhere, a dock with patent or other slips, workshops, buildings, machinery, etc., for the construction and repair of steam and other vessels, to acquire other similar businesses. The company is reported to have chartered the Norwegian steamships, Transit and Thordis, each of about 3,000 tons capacity, for the purpose of putting them in the ore carrying trade. It is proposed to carry supplies from Vancouver to the mines in northern B.C. and Alaska, and to bring back ore for the Vancouver Island smelters. It is also reported that the company is negotiating for the purchase of a passenger steamer in Great Britain.

Marine Notes from the Twin Ports.

Our Port Arthur correspondent wrote Aug. 15 as follows: At present all of the elevators in Port Arthur and Fort William are practically filled with grain, and as the movement toward the seaboard is very sluggish, they are likely to remain so for some time; the daily receipts being equal to, or greater than the shipments. As there is still in the neighborhood of 11,000,000 bush. in interior elevators, and almost the same quantity in farmers' hands, still unmarketed, it is likely that the grain movement, while slow at present, will be continuous until the crop of 1907 begins to move.

The market situation is such that it prevents this movement at present, and with the likelihood of a short crop, the market is likely to be maintained fairly well. The outlook, however, for vessel men for the fall season is very bright and everyone looks forward to good substantial rates for the balance of the season.

The movement of westbound package freight this season is unprecedented, and will no doubt keep up to the limit of the capacity of vessels engaged in that trade. Coal and other coarse westbound freight is heavier than ever before at this season. Both the C.P.R. and the Pittsburg Coal Co. have passed more coal over their docks so far this season than they had up to Oct. 30 in the season of 1906.

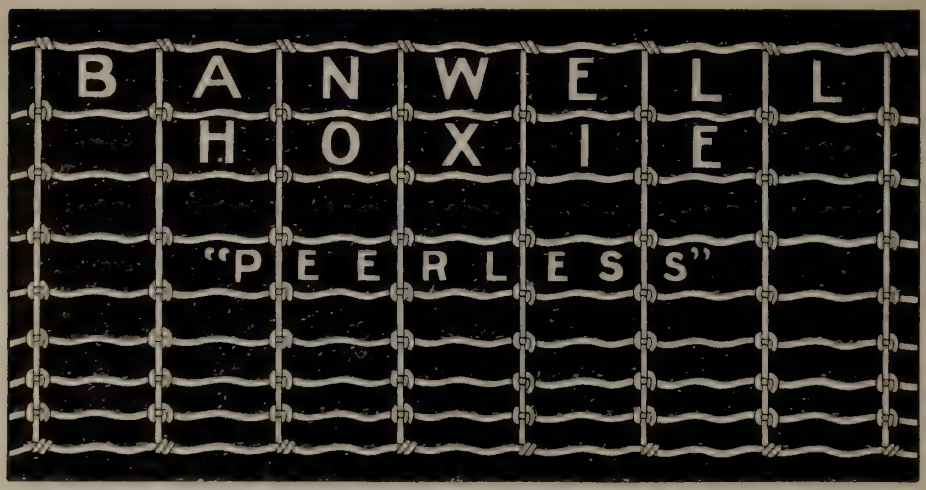
Total shipments from opening of navigation April 29, in bushels:

	To June 30	During July	To July 31.
Wheat.	16,050,998.40	6,657,135	22,708,153.00
Oats.	5,341,062.00	1,535,635	6,876,697.00
Barley.	406,838.18	162,551	569,409.18
Flax.	281,410.30	.....	281,410.30
			30,435,669 48

The British Board of Trade has issued an order that hereafter no two British vessels shall be registered under the same or similar names. A report states that the largest vessels will retain their present names, leaving it to the owners of the smaller ones to make changes. The passing of some such regulation in Canada would be an advantage, as the duplication of names, either in whole or in part, is very bad. The similarity of names in Canada, however, does not bring about much, if any, confusion, as in few cases are vessels bearing the same names to be found trading in the same waters. There are some cases in the Maritime Provinces, one of the worst being at Halifax, N.S., where there are registered one steamboat and two schooners named Annie, and schooners bearing the following variations: Annie B., Annie Eliza, Annie G., Annie Louisa, Annie McNairn and Annie S., or nine vessels registered at the one port having the same or a similar name.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM JULY 15, 1907, TO AUG. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alexander	122,506	Vancouver, B.C., 1907	Sloop	38.1	8.2	4.9	7	7	Vancouver, B.C.	R. H. Alexander, Vancouver, B.C.
Annie	122,027	Liverpool, N.S., 1907.	Schr.	115.0	28.3	10.9	225	193	Liverpool, N.S.	A. W. Hendry, Liverpool, N.S.
Bohemia	122,573	Tusket Wedge, N.S., 1907.	Sloop	31.0	12.8	6.8	10	10	Yarmouth, N.S.	W. F. Doucette, Tusket Wedge, N.S.
Bonita	122,250	West Isles, N.B., 1902	"	30.0	13.0	6.6	15	15	St. Andrews, N.B.	J. & B. Carter, Seeley's Cove, N.B.
Dominion No. 1.	121,987	Vancouver, B.C., 1890.	Barge	72.0	23.0	6.0	47	47	Victoria, B.C.	J. J. Goodwin, Victoria, B.C.
Dominion No. 4.	122,442	Boston, Mass., 1906	Dred.	109.7	44.2	8.3	538	538	St. John, N.B.	Dominion Dredge Co., Ltd., Ottawa, Ont.
Edna May	116,909	Parrsboro, N.S., 1907	Schr.	64.3	22.0	6.8	64	62	Parrsboro, N.S.	J. Woods, Parrsboro, N.S.
Eva	122,572	Pubnico, N.S., 1907	Sloop	33.0	13.0	6.8	12	12	Yarmouth, N.S.	T. Amiro, Pubnico, N.S.
Florence	122,086	Murray Harbor, P.E.I., '07.	Schr.	34.0	11.6	5.6	14	14	Charlottetown, PEI	L. Graham, Murray Harbor, P.E.I.
Florence May	122,249	Eastport, Me., 1901	"	36.5	14.8	7 2	14	14	St. Andrews, N.B.	G. E. Farnsworth, Tiverton, N.S.
Ford River	122,354	Milwaukee, Wis., 1879	"	143.0	29.0	10.0	254	210	Kingston, Ont.	H. W. Richardson, Kingston, Ont.
Frances L	122,247	White Head, N.B., 1906.	Sloop	29.0	11.0	4.5	10	10	St. Andrews, N.B.	S. Chiney, White Head, N.B.
Helena Maud	122,237	Clark's Harbor, N.S., 1907.	"	33.0	12.0	5 6	11	11	Barrington, N.S.	B. H. Smith, Cape Island, N.S.
Helena&Beatrice	122,590	Campobello, N.B., 1907.	Schr.	37.0	18.6	6.5	29	29	St. Andrews, N.B.	G. C. Calder, Campobello, N.B.
Imperial	116,571	Fort William, Ont., 1902.	Barge	120.0	38.0	7 5	306	306	Fort William, Ont.	Thunder Bay Contracting Co., Ltd., Port Arthur, Ont.
Janet	122,087	Montague, P.E.I., 1902	Schr.	35.0	11.6	5.8	14	14	Charlottet'n, P.E.I.	L. L. & W. Cheverie, Souris, P.E.I.
Kenneth C.	116,910	Port Greville, N.S., 1907.	"	162.2	35.4	12.9	551	475	Parrsboro, N.S.	S. M. Cochrane, Fox River, N.S.
King Edward	122,482	Montreal, Que., 1903	Dred.	106.8	36.5	7.0	330	330	Quebec, Que.	W. J. Poupore, Montreal, Que.
L. L. Demarais.	122,410	St. François du Lac, Que.'07	Sloop	110.0	23.2	7.6	145	135	Montreal, Que.	L. T. Demarais, St. François du Lac, Que.
L'Etoile de Mer	122,481	Auce St. Jean, Que., 1907.	Schr.	78.4	21.3	7.6	82	82	Quebec, Que.	J. Boudreault, Auce St. Jean, Que.
Lewes	121,990	White Horse, Yukon, 1907.	Barge	105.5	34.7	5.5	167	167	Victoria, B.C.	British Yukon Navigation Co., Ltd., Vancouver, B.C.
Regina	122,484	St. Fulgence, Que., 1907.	Schr.	79.8	23.4	7.0	81	81	Quebec, Que.	J. Sheehy, Ste. Anne de Chicoutimi, Que.
S. S. Co., No. 1.	122,441	Salmon River, N.B., 1907.	"	170.6	38.3	12.6	656	565	St. John, N.B.	R. Connely, Gt. Salmon River, N.B.
Scout	122,119	Pt. Hawkesbury, N.S. 1907	Sloop	24.0	6.9	3.0	3	3	Sydney, N.S.	A. E. Nash, Sydney, N.S.
Silver Spray	122,085	Montague, P.E.I., 1907.	Schr.	35.6	13.9	5.6	16	16	Charlottet'n, P.E.I.	W. Johnston, Montague, P.E.I.
Transfer, No. 2.	122,381	Victoria, B.C., 1907.	Barge	233.0	40.7	12.0	1090	973	Victoria, B.C.	Esquimalt & Nanaimo Ry. Co., Victoria, BC.
Victoria	122,495	Escuminac, N.B., 1907.	Schr.	34.8	9.8	4.8	10	10	Chatham, N.B.	L. Lewis, Escuminac, N.B.



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Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail, will be sent free on application.
All prices are subject to change without notice.

TERMS OF PAYMENT

An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160	Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106.10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

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F. T. GRIFFIN, Land Commissioner, Winnipeg.

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LIST OF STEAM VESSELS REGISTERED IN CANADA FROM JULY 15, 1907, TO AUG. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alan	122,346	Byng Inlet, Ont., 1907	Screw ½ N.H.P.	29.0	9.0	3.3	6	4	Toronto, Ont.	W. H. Argue, Parry Sound, Ont.
Alberta M.	116,370	Goderich, Ont., 1907	" 10 "	69.3	15.0	6.5	38	26	Goderich, Ont.	W. J. Keene et al, Blind River, Ont.
Albuera	115,262	Glasgow, Scotland, 1902	" 303 "	340.7	47.6	23.4	3460	2259	St. John, N.B.	S. S. Albuera Co., Ltd., Rothesay, N.B.
Alice	122,260	Toronto, Ont., 1907	" 54 "	125.5	25.8	10.8	403	239	Quebec, Que.	Dept. of Agriculture, Ottawa Ont.,
Annie	122,503	Vancouver, B.C., 1907	" 9 "	46.4	12.9	6.4	38	26	Vancouver, B.C.	H. McCartney & D. Simpson, Vancouver, B.C.
Arcola	108,250	West Hartlepool, Eng., 1897	" 240 "	314.0	44.1	20.7	2599	1651	St. John, N.B.	S. S. Arcola Co., Ltd., Rothesay, N.B.
Bessie F.	122,348	Gravenhurst, Ont., 1907	" 4 "	26.0	6.1	2.5	3	2	Toronto, Ont.	H. Ditchburn, Gravenhurst, Ont.
Carlotta	122,412	Midland, Ont., 1907	" 13 "	75.0	17.4	8.0	96	34	Midland, Ont.	J. Playfair, Midland, Ont.
Cheronea	106,859	Glasgow, Scotland, 1897	" 294 "	324.7	47.9	22.6	3189	2060	St. John, N.B.	S. S. Cheronea Co., Ltd., Rothesay, N.B.
Cunaxa	109,412	" " 1898	" 294 "	324.5	48.0	22.5	3125	2048	" "	S. S. Cunaxa Co., Ltd., Rothesay, N.B.
Daphne	122,028	United States	" 6 "	44.0	10.4	4.6	11	7	Liverpool, N.S.	V. J. Paton & F. W. Clark, Bridgewater, N.S.
Deerhound	109,680	Birkenhead, Eng., 1901	" 150 "	189.0	26.1	9.5	483	39	Quebec, Que.	The P. O. Dept., Ottawa, Ont.
D. F. Co., 4	122,029	Lunenburg, N.S., 1907	" 1 "	26.6	9.8	4.5	7	6	Liverpool, N.S.	J. F. Seldon, Liverpool, N.S. and W. H. Doggett, White Point, N.S.
Dolphin	122,349	Toronto, Ont., 1906	" ½ "	24.0	4.8	2.7	2	1	Toronto, Ont.	G. M. Henry, Gregory, Ont.
Donald	111,963	Napanee, Ont., 1907	" ½ "	36.0	8.7	3.2	10	7	Picton, Ont.	J. Thompson, South Bay, Ont.
Dorothy N.	122,497	Newcastle, N.B., 1907	" 12 "	69.0	10.6	5.3	46	36	Chatham, N.B.	F. R. McD. Russell, Vancouver, B.C.
Ellwood	121,989	Victoria, B.C., 1907	" 1 "	25.6	8.0	3.0	7	5	Victoria, B.C.	F. L. & J. H. Smith, Victoria, B.C.
Elsa May	122,505	Vancouver, B.C., 1907	" 1 "	32.0	10.6	4.5	12	8	Vancouver, B.C.	C. A. Davidson, Vancouver, B.C.
Eretria	113,473	Glasgow, Scotland, 1901	" 303 "	341.0	47.6	23.5	3464	2255	St. John, N.B.	S. S. Eretria Co., Ltd., Rothesay, N.B.
Eva	122,358	Kingston, Ont., 1906	" 2 "	28.0	5.8	2.9	3	2	Kingston, Ont.	F. Blake, Barriefield, Ont.
Glenmount	122,408	Dumbarton, Scotland, 1907	" 202 "	249.1	42.6	20.6	1957	1246	Montreal, Que.	Montreal Transp. Co., Ltd., Montreal, Q.
Gonow	122,632	Gananoque, Ont., 1904	" 2 "	22.2	4.9	1.9	1	1	Kingston, Ont.	G. H. Funnell, Gananoque, Ont.
Gowanda	122,432	Little Current, Ont., 1907	" 4 "	35.4	6.2	3.0	5	4	Sault Ste. Marie Ont.	N. Trotter, Little Current, Ont.
Hazel W.	122,433	Marquette, Mich., 1897	" 2 "	29.0	6.5	3.1	4	3	" "	Mrs. S. McNabb, S. Ste. Marie, Ont.
Helen	122,476	Midland, Ont., 1903	" 1 "	25.4	6.1	3.0	2	1	Ottawa, Ont.	R. C. Argue & F. McLaughlin, Latchford, Ont.
Hero	122,483	St. Joseph de Levis, Q. 1907	" 6½ "	54.3	15.6	5.7	32	22	Quebec, Que.	A. Bernier, St. Joseph de Levis, Que.
Himera	115,313	Glasgow, Scotland, 1902	" 303 "	339.3	46.0	25.8	3606	2351	St. John, N.B.	S. S. Himera Co., Ltd., Rothesay, N.B.
Idonno	122,355	Gananoque, Ont., 1907	" 2 "	29.6	6.7	3.0	4	3	Kingston, Ont.	G. H. Funnell, Gananoque, Ont.
Indiola	125,971	Toronto, Ont., 1905	" 1 "	34.0	8.0	3.0	6	4	Toronto, Ont.	I. N. Devins, Toronto, Ont.
Jim and Tom	100,628	Collingwood, Ont., 1907	" 10 "	63.6	14.6	6.6	33	22	Port Dover, Ont.	F. W. Doty, Goderich, Ont.
John Irwin	107,002	Paisley, Scotland, 1897	" 420 "	140.0	23.1	9.7	303	80	Halifax, N.S.	Port Hood, Richmond Ry. Coal Co., Ltd., Halifax, N.S.
Jos. B. Dewey	122,344	Monroe, Mich., 1901	" 5 "	67.0	14.4	6.4	25	19	Toronto, Ont.	W. E. Bigwood, Toronto, Ont.
Jumbo	122,421	Mahone Bay, N.S., 1907	" 12 "	35.0	8.6	3.7	6	4	Halifax, N.S.	A. R. Cogswell, Halifax, N.S.
La Reine	121,779	Winnipeg, Man., 1906	" 1 "	43.0	10.0	4.0	22	15	Winnipeg, Man.	M. F. Sproule, Winnipeg, Man.
Leuctra	110,542	Glasgow, Scotland, 1899	" 290 "	324.7	45.4	22.5	3027	1950	St. John, N.B.	S. S. Luectra Co., Ltd., Rothesay, N.B.
Light Star	122,380	Vancouver, B.C., 1907	" 1 "	30.0	9.4	3.1	7	5	Vancouver, B.C.	J. Valiente, Vancouver, B.C.
Linde	122,502	" "	" 2 "	30.8	8.6	4.2	8	6	" "	J. E. Macrae, Vancouver, B.C.
Lolita	122,633	Gananoque, Ont., 1904	" 3 "	24.6	5.5	2.3	2	1	Kingston, Ont.	W. Funnell, Gananoque, Ont.
Lyle	116,958	Algonac, Mich., 1904	" 5 "	30.0	7.5	2.8	5	3	Sarnia, Ont.	D. J. Symes, Corunna, Ont.
Mautinea	105,398	Glasgow, Scotland, 1896	" 250 "	309.0	42.6	23.1	2732	1737	St. John, N.B.	S. S. Mautinea Co., Ltd., Rothesay, N.B.
Mary L.	122,345	Penetang, Ont., 1907	" 2 "	40.0	10.0	4.6	10	6	Toronto, Ont.	P. Light, Penetang, Ont.
Mattie	122,477	Cumberland, Ont., 1907	" 2 "	45.0	14.0	2.0	12	8	Ottawa, Ont.	D. N. McDonald, Cumberland, Ont.
May C.	122,356	Gananoque, Ont., 1907	" 2 "	29.9	6.6	2.7	4	2	Kingston, Ont.	E. F. Cooke, Gananoque, Ont.
Milicete	122,201	Pt. Hawkesbury, N.S., '06	" 50 "	70.0	15.0	6.3	53	45	Amherst, N.S.	N. Curry, Amherst, N.S.
Mopsley	122,504	Vancouver, B.C., 1906	" 1 "	26.6	8.0	2.4	6	4	Vancouver, B.C.	G. & C. Everitt, Vancouver, B.C.
Nora Creina	122,501	" 1907	" ½ "	22.3	6.1	2.5	2	1	" "	W. B. Barwis, Vancouver, B.C.
Orcadia	122,379	" 1907	" 1 "	26.9	8.0	3.4	7	5	" "	W. B. Hood, Vancouver, B.C.
Pandosia	110,649	Glasgow, Scotland, 1900	" 290 "	330.6	48.1	23.5	3326	2165	St. John, N.B.	S. S. Pandosia Co., Ltd., Rothesay, N.B.
Platea	106,879	" " 1897	" 294 "	324.6	48.0	22.6	3169	2044	" "	S. S. Platea Co., Ltd., Rothesay, N.B.
Princess Royal	121,988	Victoria, B.C., 1907	" 177 "	228.0	40.0	16.6	1997	981	Victoria, B.C.	C. P. Ry. Co., Montreal, Que.
Puffing Billy	122,493	Shippegan, N.B., 1903	" 3 "	35.5	10.0	2.5	9	9	Chatham, N.B.	J. H. Taylor, Campbellton, N.B.
Pydna	111,632	Glasgow, Scotland, 1900	" 241 "	309.6	44.5	22.5	2868	1855	St. John, N.B.	S. S. Pydna Co., Ltd., Rothesay, N.B.
Quebec	122,478	Carleton Place, Ont., 1907	" 2½ "	30.6	7.1	3.0	5	4	Ottawa, Ont.	Temiskaming Nav. Co., Ltd., Mattawa
Rex	122,494	Chatham, N.B., 1907	" 10 "	77.0	19.4	5.5	60	38	Chatham, N.B.	J. T. Rundle, Chatham, N.B.
St. George	122,350	Toronto, Ont., 1903	" 1 "	35.0	7.0	3.0	5	3	Toronto, Ont.	R. Maw, Toronto, Ont.
Savage	121,920	Kenora, Ont., 1907	" 3 "	45.0	12.0	5.0	25	17	Kenora, Ont.	J. Boucha, Kenora, Ont.
Sellasia	113,495	Glasgow, Scotland, 1901	" 303 "	340.7	47.6	23.5	3474	2263	St. John, N.B.	S. S. Sellasia Co., Ltd., Rothesay, N.B.
Stormount	122,409	Dumbarton, Scotland, 1907	" 202 "	249.1	42.6	20.6	1955	1231	Montreal, Que.	Montreal Transp. Co., Ltd., Montreal, Q.
Sunbeam	122,507	Vancouver, B.C., 1907	" 3 "	41.0	11.3	5.0	23	15	Vancouver, B.C.	S. F. Mackenzie, Vancouver, B.C.
Supply, No. 3	122,413	Midland, Ont., 1907	" 1 "	29.0	8.0	3.0	11	7	Midland, Ont.	Playfair, Preston Co. Ltd., Midland, Ont.
Swatiska	122,357	Kingston, Ont., 1907	" 2 "	43.6	8.4	3.6	9	6	Kingston, Ont.	J. H. Davis, Kinston, Ont.
Tanagra	110,601	Glasgow, Scotland, 1899	" 290 "	330.5	48.1	23.5	3317	2159	St. John, N.B.	S. S. Tanagra Co., Ltd., Rothesay, N.B.
Tillicum	122,359	Brighton, Ont., 1907	" 1 "	29.8	5.6	3.0	3	2	Kingston, Ont.	M. L. Butler, Brighton, Ont.
Tourist	122,443	Margaretsville, N.S., 1907	" 25 "	37.0	12.4	4.5	15	10	St. John, N.B.	J. C. Welton, North Kingston, N.B.
Trebia	115,272	Glasgow, Scotland, 1902	" 303 "	338.7	46.0	25.7	3586	2343	" "	S. S. Trebia Co., Ltd., Rothesay, N.B.
Verbena	122,601	Kenora, Ont., 1907	" 13 "	70.0	16.0	6.0	72	49	Kenora, Ont.	Lake of the Woods Milling Co., Ltd., Keewatin, Ont.

Notices to Mariners.

The Department of Marine has issued the following notices to mariners:

No. 57. June 29.—Prince Edward Island—156. East coast, Souris harbor, temporary mooring buoy. New Brunswick—157. Northumberland Strait; Richibucto harbor entrance, south beach, change in position of bar range lights, channel range lights extinguished. 158. Chaleur Bay, Heron rock, change in color of buoy.

No. 59. July 5.—Quebec—166. River St. Lawrence, ship channel between Quebec and Montreal, Lake St. Peter, Pointe du Lac range, lights shown from new lighthouses.

No. 60. July 10.—British Columbia—167. Haro strait, Kelp reefs, light established on beacon. 168. Strait of Georgia, Gabriola reefs, Thrasher rock, light established on beacon. 169. Grenville channel, western entrance, Watson rock, gas-lighted beacon established. 170. Chatham sound, Pointers rock, gas-lighted beacon established. 171. Chatham sound, Prince Rupert harbor, Casey point, change in character of buoy.

No. 61. July 17.—Quebec—172. River St. Lawrence, Quebec harbor, Fly bank, gas buoy established. 173. River St. Lawrence, Montreal harbor, St. Lambert shoal, buoy established.

No. 62. July 17.—Ontario Lighthouse Division—174. Quebec, Ottawa river, Ste. Anne lock, changes in range lights. Ontario—175. Lake Ontario, off Toronto, Gibraltar point, light still maintained. 176. Lake Huron, north channel, McKay island, lighthouse established.

No. 63. July 19.—Quebec—177. Gulf of St. Lawrence, Seven Islands, Carousel Island, light station—change in fog alarm.

No. 64. July 20.—Atlantic Ocean—178. Derelict reported. New Brunswick—179. Bay of Fundy, St. John tide tables, error in time. 180—St. John River, Belleisle bay, Long point, light established. Ireland—181. South coast, galley head light, character altered.

No. 65. July 24.—General—182. Canadian list of lights and fog signals, new edition. Nova Scotia—183. Bay of Fundy, Petit passage, Long island, Boar's Head, change in character of light.

No. 66.—British Columbia—184. Canadian list of lights and fog signals, new edition. 185. Discovery passage, Seymour narrows, Maud Island, gas-lighted beacon established.

The following have been issued by the U.S. Hydrographic Department:

No. 29. July 20.—St. Mary's River—1315. Mud Lake, Winter point range light station, change in lights. 1316. Old channel, Neebish Island (Hen and Chickens), range lights to be re-established. Lake Erie—1321. Huron harbor entrance, light moved.

M. J. Butler, Deputy Minister of Railways and Canals, accompanied by D. Pottinger, General Manager, made an inspection tour of the I.C.R. lines and shops during Aug.

Hall and Holcomb, Limited, has been incorporated under the Ontario Companies' Act, with a capital of $25,000 and offices at Ottawa, to acquire, carry on and extend the general forwarding business heretofore carried on as Hall and Holcomb. The provisional directors are: J. H. Hall, R. T. Holcomb, and G. T. Harris, Ottawa.

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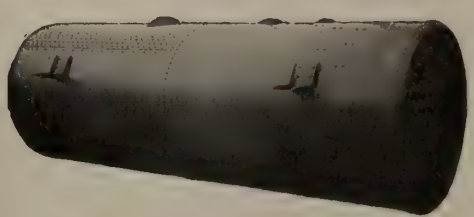

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The Allan Steamship Grampian.

The twin screw steamer Grampian—the first of the two large passenger and cargo vessels which have been ordered for the Glasgow section of the Allan Line service between Great Britain and Canada, was launched at Linthouse, Govan, Scotland, July 25. The Grampian has, in dimensions, about reached the limits that the Clyde docks can accommodate, and will, with her sister ship, the Hesperian, now well advanced in construction, form an important addition to the fleet of steamers which are run under the Allan Line flag from Glasgow. The Grampian is 502 ft. long, and 60 ft. broad, with a depth to her shelter deck of 41½ ft., and a gross register tonnage of about 10,000. She is built to the highest class of the British Corporation for the Survey and Registry of Shipping; is constructed on the cellular double bottom principle, and is specially strengthened for her North Atlantic trade. Her dead weight capacity will be about 9,000 tons, and her internal cubic space will greatly exceed this figure. To facilitate the stowage of cargo, the pillaring of the holds is of the new tubular form, widely spaced, and her numerous steam winches and other appliances are of the most complete design for the rapid loading and discharging of cargo. Nine large chambers, with a capacity of 23,000 cu. ft, are being fitted up for cold storage of cargo and ship's provisions, cooled by refrigerating machinery.

The 'tween decks are lofty, and the staterooms large and tastefully furnished, giving accommodation for 500 first and second class cabin passengers, and in the third class provision is made for 1,400 passengers, who will be carried in four-berth rooms. For each of the classes large and well appointed dining saloons, music rooms, libraries, lounges, smoke rooms and covered-in recreation spaces have been provided. The first and second class public rooms are tastefully panelled in white enamel, in fumed oak, mahogany and other hardwoods, and those of the third class are finished in polished pitch pine. The ship is lighted throughout by electricity, and to ensure its unbroken maintenance the supply plant is duplicated, and in addition to natural ventilation the 'tween decks and emigrants' spaces are heated and ventilated on the thermo-tank system. There are separate galleys amidships, and at each end for passengers and crew. The Grampian is a twin screw steamer propelled by a double set of triple expansion engines, designed to maintain at sea a speed which will enable her to make the passage from her last port of call, Moville, to Rimouski, in less than seven days. Her ample boiler power is fitted with forced draught, and her engine room has a very complete installation of auxiliary machinery.

The Grampian is to sail on her maiden voyage from Glasgow to Montreal on Sept. 21. Her sister ship, the Hesperian, will take her place in the service early next year in time for the spring season's trade. Both vessels are being constructed under the personal supervision of A. M. Gordon, Naval Architect; D. Johnston, Superintendent Engineer, and Capt. Christie, Marine Superintendent, on behalf of the owners. The builders are Alex. Stephen & Sons, Ltd.

The Department of Marine has made the following appointments: A. Cyr, harbormaster at Grand Entry, Magdalen Islands, Que.; W. M. Long, measuring surveyor of shipping at Peterborough, Ont.; M. Poirier, shipping master at Glace Bay, N.S.; and W. Phalen, port warden at Glace Bay, N.S.

Stranding of Steamship Montrose.

Commander O. G. V. Spain, Dominion Wreck Commissioner, with Capt. A. Reid, Port Warden of Montreal, and C. A. Raymond, branch pilot for and below Quebec, as assessors, held an investigation at Montreal July 5 and 6, into the causes which led to the stranding of the S.S. Montrose on Red Island reef, St. Lawrence River, on July 2, when en route from Antwerp to Montreal. The following judgment was delivered Aug. 12:

The court, on the termination of hearing all the evidence which it was possible to obtain, and after affording both the pilot and the master and officers of the ship full opportunity for defence and explanation, finds as follows: The S.S. Montrose is a vessel of 6,278 tons gross, and owned by the C.P.R. Co., registered at the port of Liverpool, Eng., and commanded by Capt. J. H. Moore, who holds a Board of Trade master's certificate. The Montrose was fully found in all the requisites to safe navigation, and properly manned, in accordance with the Act. From all the evidence adduced, all went well on the voyage until after the vessel passed Father Point, at which place, at 7.56 a.m. apparent time, on July 2, Branch Pilot J. H. Talbot, who holds a pilotage certificate for and below the harbor of Quebec, was taken on board, and took charge of the navigation of the vessel. At this time the weather was fairly clear, and the east end of Barnaby Island was visible, but the weather conditions were such as conduce to caution. At 9 a.m. Bicquette was passed at an approximately assumed distance of three miles, but nothing was observed; weather thick and lifting at intervals. At 11.30 a.m. the vessel was enveloped in thick fog, but the sound signal on Red Island lightship was heard right ahead; ship was continued at full speed, which was in the neighborhood of 10½ to 11 knots; for some reason, not satisfactorily explained to the court, they passed north of the Red Island lightship, starboarding the helm, and passing between the ship and the island. The testimony at this point is somewhat conflicting, it being impossible to find out exactly how long the ship was headed to the S. E., but the evidence of the master and officers of the vessel shows that the lightship was passed at 11.56 a.m., and the Montrose was steadied on her course of S. W. b. W. ¼ W. at 12.02 p.m. (or six minutes), and she took the ground at 12.18 p.m.; clearly proving that she could not have run on the S.E. course for as long a time, or for as great a distance, as the officers in charge assumed she had. The court considers that the pilot, J. H. Talbot, was guilty of a grave error of judgment, insomuch as he continued at full speed, and on too fine a course, without first ascertaining, by the lead or otherwise, that the vessel was in a safe position to clear a thoroughly well-known danger. At the same time the court cannot exonerate the master, J. H. Moore, from blame, as this officer accepted the actions of the pilot as correct, and allowed him to alter the course, and continue at full speed, without first assuring himself of the actual position of the vessel—which might have been so easily and conveniently found out by taking the departure from the lightship, and running a course that would determine a safe offing from the Red Island reef. The court, taking into consideration the excellent record as a pilot held by J. H. Talbot, fines him $100, which is to be paid in four quarterly instalments of $25 each; Capt. J. H. Moore is admonished and warned to be more careful in future. The court exonerates the other officers of the S.S. Montrose.

Maritime Provinces Deal Ports.

J. H. Scammell & Co., St. John, N.B., have issued a map showing the location of the deal ports in the Maritime Provinces and giving the following information in regard thereto:

Loading Port	Depth of Water on Bar at High Tide.	Depth in Harbor.	How Cargo is delivered.	Cost per standing 1907
St. John, N.B.	42 ft.	50 ft.	Lighters, cars.	$1.00
Musquash, N.B.	22-24 ft.	30 ft.	Lighters	95c. 1.00
Cape Tormentine, N.B.	No bar.	19 ft.	Wharf.	80
Grindstone Island, N.B.	No bar.	30 ft.	Lighters.	75
Hopewell Cape, N.B.	No. bar	30 ft.	Lighters.	75
West Bay, N.S.	No bar.	30 ft.	Lighters.	75
Tusket Wedge, N.S.	No bar.	30 ft.	Lighters.	1.00
St. Margaret's Bay, N.S.	No bar.	30 ft.	Rafts.	90
Halifax, N.S.	No bar.	40 ft.	Wharf	1.00
Sloop Harbor, N.S.	No bar.	30 ft.	Wharf, lighters.	90
Sheet Harbor, N.S.	No bar.	30 ft.	Rafts.	90
Liscomb, N.S.	No bar.	40 ft.	Rafts, lighters.	90
Sherbrooke, N.S	No bar.	18-22 ft.	Wharf, rafts.	90
Pugwash, N.S	22½ ft.	20-21 ft.	Wharf, rafts.	90
Baie Verte, N.B	No bar.	30 ft.	Rafts.	1.00
Shediac, N.B	17 ft.	20 ft.	Wharf, rafts.	80
Miramichi, N.B.	18-22½ ft.	30 ft.	Wharf.	1.50
Bathurst, N.B.	No bar.	30 ft.	Lighters	1.25
New Mills, N.B	No bar.	30 ft.	Lighters	90
Dalhousie, N.B	No bar.	30 ft.	Wharf	90
Campbellton, N.B	20½ 22 ft.	23 ft.	Wharf, lighters.	90
Gaspe, Que	No bar.	20-25 ft.	Wharf.	1.00
Barachois, Que	No bar.	30 ft.	Lighters	1.00

The United States Government is reported to have completed surveys for the proposed canal from Lake Erie to the Ohio River. The proposed canal will be 133 miles long, 177 ft. wide and 13 ft. deep. It will, as nearly as possible, follow the natural waterways, and is estimated to cost $75,000,000. A special line of vessels will have to be constructed for the canal, which is intended for the carrying of coal.

The Dominion Government has granted permission to the U.S. Government to take the former Spanish gunboat, Sandoval, to Rochester, N.Y., as a training vessel for the naval militia there. This is the second of the Spanish naval vessels captured by the U.S. in the war of 1897 to be brought to the Great Lakes. The vessels, it is said, are to be used solely as training ships and are to remain unarmed.

Orders-in-Council have been passed authorizing changes in the names of vessels as follows: Hattie Hansen, steamboat, official number 122,338, registered at Vancouver, B.C., to that of Sechelt. Queen City, steamboat, official number 121,890, registered at Victoria, B.C., to that of Queen. Belle, steamboat, official number 85,674, registered at Victoria, B.C., to that of Red Fir. Mabel Bradshaw, steamboat, official number 117,085, registered at Collingwood, Ont., to that of Soo City. General Wm. B. Franklyn, steamboat, official number 122,352, registered at Kingston, Ont., to that of Arrah Wanna. F. Patchin, schooner, official number 103,465, registered at Halifax, N.S., to that of Doris Hull.

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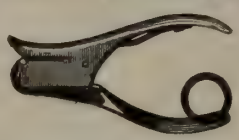

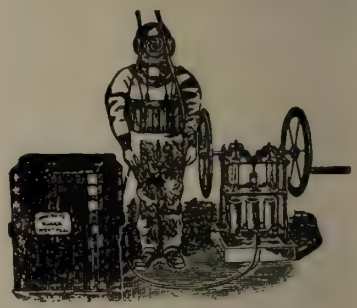

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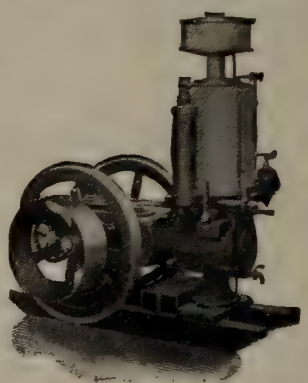

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The Lake Freight Situation.

Our Winnipeg correspondent wrote Aug. 17 as follows: Since last report freight matters on the Great Lakes have been greatly upset, first owing to the strike of the ore trimmers on the United States side of the line, and later by the telegraph operators' strike. The effect of the first named strike was to throw hundreds of ore boats out of employment, and as a result they all looked for cargoes in the grain trade, with the result that the grain rate, Fort William to Buffalo, dropped from 2¼c. to 1c., and even at that figure a great many boats were not able to secure anything and were forced to go east light. The reduction in U.S. rates also had its effect on Canadian rates, the latter dropping from 2c. Georgian Bay ports to 1½c., the half cent reduction also applying to Kingston and Montreal business. The ore trimmers' strike had just been settled, and matters were beginning to be normal when the telegraphers' strike took place, and the result of this is still to have its effect, but already grain shippers at this end are unable to reach their New York buyers, and the result is that Buffalo business is at a complete standstill, and as Montreal is not in shape to take care of any new business until well into September, the grain trade is at a standstill until the last strike is settled.

Outside the labor troubles conditions in the bulk freight trade have never been better, and in spite of the strikes, vessels will this season show the best earnings that they have done in a number of years, as the delay in moving freight now will force a higher range of rates later, so that vessel owners will not lose anything on account of the various delays.

Port Colborne Harbor, etc.

By DeWitt Carter, Port Colborne, Ont.

Port Colborne, being the Lake Erie entrance to the Welland canal, is one of Canada's national harbors. The Dominion Government, through the Departments of Railways and Canals and Public Works, have expended a large amount of money on deepening the harbor and enlarging it by building two large breakwaters, which protect and make the outer harbor. In this outer harbor they have constructed two large piers for elevator sites. On the western pier the Government is now building one of the finest and fastest working transhipment and storage elevators in the world. It is to be built wholly of steel and cement, and will be practically fireproof. It will have four unloading legs with an hourly capacity of 20,000 bush. each. When completed it will put our water route on an equality with the United States route, via Buffalo, down to this point. The largest bulk freight steamers on the upper lakes can quickly unload their grain cargoes here and then go to some Lake Erie port and reload coal for the head of the lakes. From here to Montreal the grain can be shipped in barges, whose running expenses are much less per day than steamers. Though the barges cannot be towed as fast on the lakes as steamers usually run, they can make just as fast time in the canals, therefore their earning powers in the canals are greater when compared to their earning powers on the lakes than steamers. For the past 25 years St. Lawrence River barges have been towed between Kingston and Lake Superior, carrying grain, and during all that time only one has been lost, and that was near the head of Lake Superior, through an accident. They have proved themselves seaworthy craft on all our great lakes. When these barges are loaded with grain here they can deliver it to ocean steamers at Montreal.

The Welland Board of Trade, and especially some of its members, have questioned the advisability of the Government building a transhipment and storage elevator here, and with other boards of trade throughout the country have strongly petitioned the Government to enlarge the Welland canal as the best means of reducing the cost of transportation of grain and other products from the interior to tide water. If we are to have another era of canal enlargement as a means of reducing freight rates and increasing traffic, by all means commence at Montreal and work west. Our latest Dominion statistics show that for the last 15 years there given, that less than 55% of the freight that passed down through the Welland canal for export passed out through Montreal, while over 45% went by U.S. ports, practically all through Ogdensburg. During this period scarcely nothing has gone through the Erie canal from Oswego. When the thousand ton barge canal, now being constructed between Oswego and New York, is completed, the St. Lawrence route will have a strong competitor for grain passing through the Welland canal. Therefore if it is a national interest that the Welland Board of Trade takes in our all water route, it should take up the matter of canal improvement east of Kingston, instead of west. The Kingston Board of Trade sent out a copy of a resolution which was adopted by the Welland Board of Trade and many others. This resolution showed through the juggling of figures as to the distances, carrying capacities and freight rates that by enlarging the Welland canal, so that the largest upper lake steamers could carry full cargoes from Lake Superior through to Kingston, that the freight between Port Colborne and Kingston would be reduced to ½c per bushel. If such a reduction can be made by enlarging the Welland canal, why not enlarge the St. Lawrence canals and thus eliminate transhipment between the head of the lakes and Montreal? The Kingston resolution did not ask for improvements on the St. Lawrence canals, they merely desired transhipment at Kingston instead of at Port Colborne. Like the promoters of the Georgian Bay-Ottawa canal, they ignore three prime factors, namely —time, risk of damage, and return cargoes.

I do not believe that the enlargement of the Welland canal would materially reduce the rate of freight between Port Colborne and Kingston. I have several reasons for this conclusion, but I shall give only the following, as it will be most easily understood. The important factor in water transportation is time, especially with large and expensive steamers. When they figure on a freight they reckon the time from the moment they commence to load a cargo until they deliver it, and reach a point where they can reload another. The rate of freight per bushel from the head of Lake Superior to Buffalo this season has been about 2c. for wheat; from the head of Lake Superior to Kingston 4c., and to Montreal 6c. It takes about four days to make the run from the head of Lake Superior to Buffalo; eight days from the head of Lake Superior to Kingston and return to Lake Erie; and 12 days to Montreal and return to Lake Erie. It will be seen from the rate of freight and time taken on the trip to the three different ports, that the charge is ½c. per bushel for each day over these routes. The freight rates paid on the upper lakes govern largely the rate paid to Kingston and Montreal. Now, unless you can materially reduce the time that it now takes a steamer to go from Port Colborne to Kingston and return to Lake Erie I cannot see why the rate of freight would be reduced by enlarging the Welland Canal. It is not reasonable to expect that the large steamers will carry freight for less per day between Lake Erie and the foot of Lake Ontario, than they would carry it for on the upper lakes. In giving the time of the steamer that delivers her cargo at Kingston as eight days, I figure it up to the time she will arrive back on Lake Erie, where she must come to place herself on an equality with the steamer that goes to Buffalo, because there are practically no return freights from Lake Ontario. Steamers are returning up through the canal light every day, and going to Buffalo or some south shore port on Lake Erie to load coal for Lake Superior.

While Canada during the past quarter of a century has been expending millions on canal enlargements, our competitor, Buffalo, has merely improved and deepened her harbor, provided fast unloading facilities and elaborate storage for over 20,000,000 bush. of grain, and through these improvements has constantly diverted traffic that should have passed through our canals to the seaboard. With this precedent within 20 miles of our harbor, I feel certain that time will show the wisdom of those who have assisted and encouraged the Government to make the much needed harbor improvements and build an up-to-date transhipment elevator here.

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie canals in July:

Articles.			Canadian Canal	U.S. Canal	Total
Copper	Eastbound	Net tons	892	12,299	13,191
Grain	"	Bushels	3,885,777	2,243,715	6,129,492
Building stone	"	Net tons	....	100	100
Flour	"	Barrels	273,724	331,230	604,954
Iron ore	"	Net tons	1,092,347	3,431,684	4,524,031
Iron, pig	"	"	2,840	....	2,840
Lumber	"	M. ft. B.M.	5,781	90,127	95,908
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	5,361,296	5,739,722	11,101,018
General merchandise	"	Net tons	15,000	5,443	20,443
Passengers	"	Number	4,467	6,901	11,368
Coal, hard	Westbound	Net tons	22,455	173,940	196,395
Coal, soft	"	"	307,020	1,267,894	1,574,914
Flour	"	Barrels	....	....	....
Grain	"	Bushels	....	....	....
Manufactured iron	"	Net tons	11,330	23,693	35,023
Salt	"	Barrels	3,859	33,456	37,315
General merchandise	"	Net tons	44,010	80,080	124,090
Passengers	"	Number	4,332	6,948	11,280
Freight—Eastbound		Net tons	1,391,948	3,865,295	5,257,243
" Westbound		"	385,367	1,550,626	1,935,993
Total freight		"	1,777,315	5,415,921	7,193,236
Vessel passages		Number	771	2,022	2,793
Registered tonnage		Net	1,290,130	4,006,384	5,296,514

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Articles With Seamen.

F. King, Secretary Dominion Marine Association, has issued the following circular: "My circular of May 16 last, suggested that the refusal of any seaman to sign articles should be carefully noted in order that evidence should be available in the event of proceedings against the master for carrying a seaman without a signed agreement. Since then officials have imposed fines in certain cases even where this proof was produced. The Association has appealed to the Department of Marine against this apparent injustice and has asked for special consideration in cases where urgent circumstances have required masters either to pick up men upon their own terms or else sail shorthanded, but the Department intimates that the statute must be rigidly enforced, and that the only way to avoid possible penalties is for a master to refuse to take a seaman who refuses to sign articles. Following is an extract from a letter from the Deputy Minister of Marine, dated July 23:

"'The Department in its endeavors to bring about an observance of the law respecting the shipping and discharge of seamen on inland waters, is more than gratified with the results achieved, especially as that law had become practically a dead-letter. But the Department does not forget that the credit is due chiefly to ship-owners and captains who have co-operated with the Department in the matter. Agreement forms have been written and telegraphed for from all parts of the country and thousands of forms have been sent out. And one very satisfactory feature of it is that the law, so far, is being brought into operation again with but comparatively few fines, and I am prepared to say, with reference to the occasional refusal of seamen to sign an agreement, that if ship owners and captains of inland vessels continue to insist on the carrying out of the law, it will only be a short time when such a thing as a seaman on the inland waters refusing to sign an agreement will not be heard of."

Among the Express Companies.

C. G. McCoy, for the past 18 years agent National Ex. Co., Rouse's Point, N.Y., died there Aug. 4. For some years he was express messenger for the N. Ex. Co. on the run into Montreal.

The carriage of c.o.d.. parcels containing intoxicating liquor is prohibited by law in the province of Nova Scotia, where the Canada Temperance Act is in force, and the express companies have, as a consequence, forbidden their agents to accept such consignments. The management of the Sydney and Louisburg Ry. has directed its agents to refuse to receive for carriage any consignment which they may suspect to contain intoxicating liquor.

Telegraph and Cable Matters.

W. E. Earle, Manager of the Western Union Cable office at North Sydney, N.S., has presented a pipe organ to St. John's church there.

The G.N.W. Telegraph Co. has closed its offices at Cornell, Finch, Springtown, Ont.; Lanoraie, Que.; and has opened offices at Norval Station, Petawawa Camp, Ont.

An official of the Marconi Telegraph Co. in London, Eng., was quoted, Aug. 2, as saying that a radiograph service will be begun between the company's stations in Clifden, Ireland, and Glace Bay, N.S., early in Sept.

The G.T. Pacific Ry. offices in Winnipeg are being moved from Main st. to Arknis block, Portage ave.

Standard Time.

By W. J. Camp, Electrical Engineer, C.P.R. Telegraphs.

A vital necessity in the safe and efficient handling of trains is that all clocks and watches must indicate uniform time. Many serious accidents have resulted from a difference between the timepieces of two employes, and during the past few years most of the railway companies on this continent have spent a great deal of money toward securing uniformity throughout their systems.

The C.P.R. management, recognizing the great importance of a uniform time system, has established a Time Service Department under the supervision of Mr. J. J. F. Houghton, to whom I am indebted for a large part of the matter contained in this paper. The daily transmission of time signals is looked after by the telegraph department, and the following description of the method may be of interest. On account of the very long circuits worked, it has been found best to transmit the signals by hand. At 11.53.50 the preliminary caution "BK time" is given by Montreal on all duplexes and half quads over which it is desired to send the signals, as a warning to the various repeater offices to cut in their combinations. The single wires are then cut in at Montreal and other points are switched on, and a second warning of "time" is given, then single beats are made corresponding to the swing of the main clock pendulum, by alternately closing and opening the circuit each second; the beats are therefore one second in length. These are continued until 11.54.50, when the circuit is left open for ten seconds. At exactly 11.55.00 a long double beat is given and continued each alternate second until 11.55.50, when another pause of 10 seconds is made and at 11.56.00 a double beat completes the transmission.

The repeater arrangements at Montreal consist of five relays of 75 ohms, each connected up in series with an ordinary Morse key in a pony circuit. The lead from the local dynamo to the desired duplex and quad tables passes through the contact points of one relay. By means of the loop switch any duplex or half quad can be thrown into the combination. The positive and negative 130 and 200-volt dynamo leads pass through the contact points of the other four relays to the various single wires—a by-path is provided so that any leased or other wires over which "time" is not to be sent can be switched out of the combination.

The sparking at the relay contact points is almost nil, but should it become too great by adding more circuits, a small condenser would reduce it. A similar arrangement is used at all repeater offices where storage or dynamo current is employed, the pony circuit being worked by the relay on one of the incoming circuits. At points where a repeater office is equipped with gravity battery, there is seldom more than one or two side lines to connect up for time and in these cases an ordinary relay is employed for each of such lines. The combinations at the various repeater offices are made up at 11.30 or even earlier, but the pony circuits held closed by a button switch until the warning signal is received from Montreal, when it is only a moment's work to turn the switch and throw into the "time" circuit all wires on which it is desired that the signals be sent.

C.P.R. time is regularly forwarded to Fanning and other islands in the Pacific ocean, and to Bermuda, Jamaica, and the Azores Islands in the Atlantic. Officers on vessels of the British navy frequently check their chronometers with this time at Vancouver, B.C., and Halifax, N.S., and of the German navy at the Azores.

A few words as to the accuracy of the time may be mentioned here. Some years ago a long series of observations were carried on by astronomers of Canada and Great Britain, and signals exchanged over the C.P.R. wire and Commercial Cable Co. cables. An astronomer was located at Montreal, one at Canso, one at Waterville, Ireland, and one at Greenwich, Eng. Each astronomer was stationed at each of the points named in turn, in order to eliminate the personal error Signals were exchanged in each direction, giving the transit of various stars over the meridian. Finally the land lines and cables were connected through repeaters and signals exchanged both ways direct between McGill observatory, Montreal, and Greenwich, as a check of the preceding results. From these observations was obtained the true longitude of Montreal. I believe that afterwards Washington, D.C., and various other points on this continent checked up their longitude with Montreal.

A master clock at McGill observatory sends out signals over a circuit connected with an ordinary sounder in our main office. This clock is closely regulated by a sidereal clock at the observatory, which in turn is frequently checked up by observations of the stars. We have on several occasions noticed that the "time" given over the U.S. railway lines has been as much as three seconds in error. We are satisfied that our own standard was right from the fact that the reports from the various comparison clocks on the system showed a uniform variation while the signals coming in over the New York Central Rd. wire jumped two or three seconds in one day coming practically into unison with McGill.

Comparison clocks (nos. 17 or 18 regulator) are located at all divisional points. At all comparison stations a daily record is kept of the clock variations and a report sent to the Chief Inspector at the end of each month. This report shows the seconds fast or slow and when the clock is wound, set or regulated. Each month these reports are checked up and the average weekly rating ascertained, from which a statement is compiled and a copy sent to each master mechanic, superintendent, general superintendent, the Vice-President and General Manager. The Time Inspector visits every station from one to three times per year and checks up the handling of records. All way stations are supplied with a standard telegraph clock; variations are recorded daily in same manner as comparison clocks.

Watch inspectors are located at all divisional points. They are practical watchmakers doing a regular business with the general public. It is their duty to see that all trainmasters, road foremen of locomotives, locomotive foremen, roadmasters, bridge and building masters, engineers, firemen, conductors, train baggagemen, brakemen, yardmasters and yard foremen carry watches up to the required standard and that the watches are regularly cleaned. For this purpose the inspectors are advised by the proper official of the railway of all changes in the staff of the employes mentioned.

The minimum standard of excellence adopted is a grade known among American movements as 17-jeweled, double roller escapement, Breguet hair-spring, patent regulator, adjusted to temperature, isochronism and at least five positions, and corresponding to Waltham, Appleton Tracy and Co. "nickel premier"; Ball, "official standard" 16 and 18 size; Elgin "B. W. Raymond nickel"; Hampden "new railway"; "Illinois bunn"; Hamilton "936," and all grades equal or above, also Swiss movements complying with these specifications, the variation of which must not exceed 30 seconds per week. Watches which were in service prior to the reorganization of the time service, Oct., 1899, may remain in use subject to the approval of the Chief Inspector as based on the record of their performance, or on actual test in his

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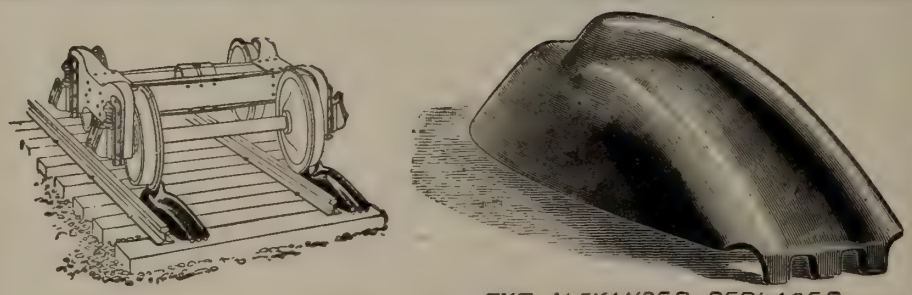

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office of their reliability. Almost every one of these watches has been removed from the service.

Employes required to carry standard watches must submit them for half-yearly inspection to the time inspector of their divisions, and receive a certificate that they are satiacsftory, a copy of which is forwarded to his superior officer and duplicate to the Chief Time Inspector. In addition to the half-yearly inspection, employes must submit their watches to the inspectors for comparison with standard time within the first and third weeks each month, and the inspectors keep a record of the rating. Failing to make such comparison the employe is not eligible for duty without an order from his superintendent. No charge is made for these comparisons. Cards for keeping record of these ratings must be carried on the person subject to inspection on demand of a superior officer. Employes must not set or regulate their own watches, unless a watch stops through neglect to wind it. Watches must be cleaned at least once in 15 months. The rate card must be filled in in the presence of the employe, who is required to initial the corresponding entry in the inspector's rating book. When a watch is repaired and cleaned by other than an inspector, it must be submitted to the inspector for approval before being used in the service. When left with an inspector for cleaning or repairs, a standard watch will be loaned to the employe free of charge until his own is returned to him.

Inspectors are required to have a thoroughly accurate seconds pendulum clock and must ascertain the error thereof to the nearest second at least once each day by comparison with the standard time sent over the company's telegraph wires. A local circuit is extended from the contact points of a telegraph relay in the station to the place of business of each inspector, for this purpose. A similar circuit is provided for roundhouses, etc. There are a number of rules and instructions to the inspectors regarding cleaning, etc., which it is not necessary to mention here.

The C.P.R. has only installed electric clocks at Montreal and Winnipeg general offices and stations. At Montreal there are 81 clocks on five circuits worked by one master clock. These circuits obtain current from a small storage battery which is kept continually charged by a lead from the 25-volt local motor-generator in the main telegraph office a mile distant. The five circuits are worked in multiple from one pair of cells—I believe this road was the first to work clock circuits in this manner. At Winnipeg there are 37 clocks on two circuits.

The results since the establishment of the present time service have been very satisfactory. On one trip across the continent by the Time Inspector he found that the average variation of all comparison clocks was less than five seconds from standard time.

General Telephone Matters.

The Nova Scotia Telephone Co. is extending its line from Lakeville to Somerset by way of Grafton, N.S.

A convention of representatives of the independent telephone companies will be opened at Toronto Sept. 4.

Tenders have been received for the construction of a subway for the Government telephone system in Winnipeg.

The New Brunswick Telephone Co. has added an information bureau at St. John, N.B., for the benefit of its subscribers.

The Bell Telephone Co. moved to new premises in Dalhousie st., Brantford, Ont., Aug. 5, where it has inaugurated a central energy system at a cost of $40,000.

The Chilliwack Telephone Co. has been incorporated under the British Columbia Companies' Act, with a capital of $20,000, to carry on within the province the business of a telephone company.

It is stated that the negotiations on the part of the Alberta Government to purchase the Bell Telephone Co.'s property in that Province have fallen through, and that in future the company will compete with the Government 'phones.

The plans for the construction of the extensions of the Bellechasse Telephone Co.'s lines into the city of Quebec have been completed. W. H. Crumb, of Chicago, Ill., has been in Quebec for some time in connection with the matter.

The Manitoba Government has sold $500,000 of telephone bonds to F. Wilson Smith, Montreal, at a price to yield 4.43% to the investor. The proceeds of the sale of bonds will be utilized for the purpose of starting construction on the provincial telephone system.

The People's Mutual Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $21,000 and offices at Bethel, Ont., to carry on a general telephone business in Prince Edward County. The provisional directors are: T. A. Crawford, W. H. Sine, A. F. Rightmeyer, W. H. Allison and A. S. Brown, of Sophiasburg tp., Ont.

At a meeting of the Markham and Pickering Independent Telephone Co. recently at Whitevale, Ont., the report showed that considerable progress had been made during the year, and the mileage had been increased. It was decided to further extend the company's lines both northerly and easterly. The officers were all re-elected for the current year.

The Blenheim and South Kent Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of $10,000 and offices at Blenheim, Ont., to carry on a general telephone business in the county of Kent. The provisional directors are: G. Taylor, J. R. Miller, H. Drane, A. Denholm, C. H. Echlin, Blenheim; W. J. Huffman, N. Watson, of Harwich tp., Ont.; T. L. Pardo, of Raleigh tp., Ont.

Press reports from England state that wireless telephone stations are to be erected at Oxford and Cambridge, which are about 60 miles apart. It is claimed that the voice will be perfectly audible, and that recent experiments have been successful in securing the proper attunement of each instrument so that a message sent through the transmitter can only be received at the station for which it is intended.

The Government telephone system between Calgary, Banff and other points in Alberta commenced operations early in August. At Montreal recently Hon. A. C. Rutherford, Premier of Alberta, stated that this system, covering a distance of 500 miles, is the first state-owned telephone system, and that more lines would be constructed in the future, but whether the rates would be lower than those of the private companies, he could not say.

Work on the Provincial Government telephone lines in Alberta is at present proceeding in four different parts of the province. It is stated that the line east of Edmonton will be completed as far as Lloydminster this year, while men are engaged on the line east of Lacombe. About 40 miles of line has been erected on the Daysland branch, and work is being gone on with on the Stettler branch, and also between Frank and MacLeod. Next year it is hoped to connect Calgary with Edmonton and Lethbridge.

The act amending the charter of the New Brunswick Telephone Co., passed at last session of the New Brunswick Legislature, provide for the increase of the capital stock to $2,000,000, which may be issued as fully paid up for the purpose of acquiring the property stocks and franchises of other companies. It is authorized to acquire the lines, etc., of the Central Telephone Co., subject to the right of the New Cumberland Telephone Co. in Nova Scotia, and the Bellechasse Telephone Co. in Quebec, to connect their lines with those of the C. T. Co. as existing Aug. 21, 1906; and to use its lines for the transmission of telegraphic messages over the same. The following lines, which had been purchased by and amalgamated with the Central Telephone Co., are authorized to be taken over, together with all their property, rights and franchises: Sackville Telephone Co., Hebert Telephone Line, Kent-O'Leary Company Line, Chatham Electric Co., Miramichi Company, Bathurst Telephone Co., Caraquet Telephone Co., Campbellton Telephone Co., Union Telephone Co. The purchase of the Madawaska Telephone Co., Chatham Electric Light Co., and of the telephone lines owned by F. L. Pedolin are ratified and confirmed.

New Brunswick Telephone Act.

The act Respecting Telephones passed at the last session of the New Brunswick Legislature provides that whenever it is decided by order-in-council that it is expedient and in the interests of the people of the province to expropriate, take and have the telephone property, rights, powers and franchises of any telephone company or companies in the province, it shall be done in the following manner: The order-in-council shall be published in the official gazette for four consecutive weeks, and at the end of one month from the date of the last publication, the telephone property and franchises shall vest absolutely in the province. The price to be paid to the company for its property and franchises so acquired shall be fixed by agreement, or in default of such agreement, by arbitration. The proposal to expropriate any telephone company must be approved of by a resolution of the Legislature before any steps are taken to expropriate.

The act also provides that every telephone company, or company having the right to charge telephone tolls, which may hereafter carry on a telephone business in the province shall file with the Provincial Secretary within a month after its annual meeting a statement of its receipts and expenditures for the previous fiscal year, together with such other information as may be required, and a copy of its tariff of telephone rates and tolls. The Government is authorized to appoint auditors at any time, to examine the books of any telephone company in the province for the purpose of ascertaining whether or not the tolls, rents, rates and charges of the company for business done, or to be done, are reasonable; and to alter or vary such tariff if it be found that after meeting all expenditures for maintenance, bonded indebtedness, renewals, etc., the company earned and paid dividends of 8% and over upon its capital stock. Such alteration of rates shall not, however, be so large as will reduce the prospective annual dividends to less than 8%.

The Municipal Council of any town having a population of 8,000 and upwards may, by a two-thirds vote, require any telephone company, when making substantial or extensive repairs or renewals of, or additions to its system, to place any portion of its wires and cables in underground conduits. The council may also fix the location of such conduits, and the location, height, etc., of any poles. No telephone company may construct any conduit without the consent of the municipality. Local municipalities or corporations having the right to con-

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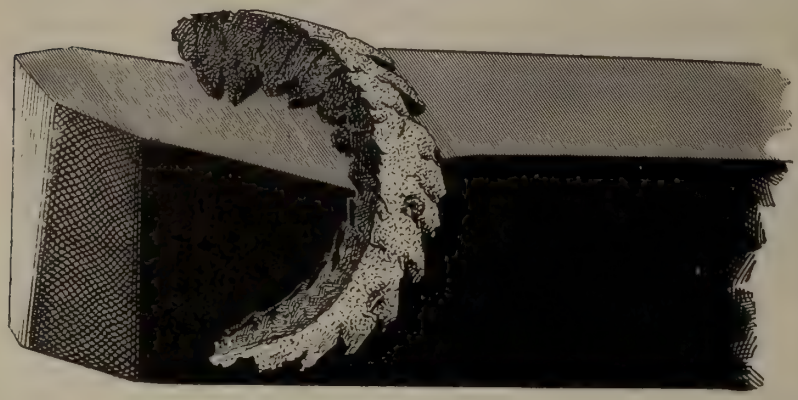

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A further sum equal to one-half of one per cent on the Common Stock will be paid thereon at the same time out of interest on the proceeds of land sales.

Warrants for the Common Stock dividend will be mailed on 30th September next to shareholders of record at the closing of the books in Montreal, New York and London respectively.

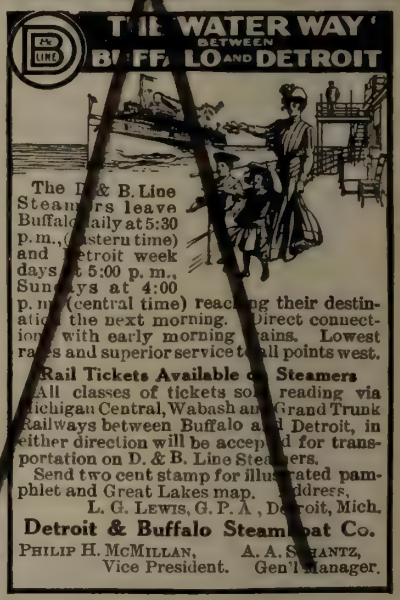
The Preference Stock dividend will be paid on Tuesday, October 1st next, to shareholders of record at the closing of the books at the Company's London Office, No. 62 Charing Cross, London S.W. The Common Stock Transfer Books will close in Montreal, New York and London at 3 p.m., Saturday, August 31st. The Preference Stock books will also close at 3 p.m. on Saturday, August 31st next.

All books will be re-opened on Thursday, 3rd October next.

By order of the Board.

CHARLES DRINKWATER,
Secretary.

Montreal, 12th August, 1907.



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struct local or long distance telephone lines are authorized to connect with the long distance lines of other similar companies, upon terms to be fixed by agreement, or upon failure to agree, upon an order-in-council, fixing terms and conditions.

The 12th section of the act sets out that whenever it shall be made to appear to the Lieutenant-Governor-in-Council that any telephone company refuses or neglects to extend its line or lines so as to afford telephonic communication to any person, persons or company desiring such extension, to a reasonable distance from the line or lines of such company, it shall be lawful for the Lieutenant-Governor-in-Council, in his discretion, and whenever it appears to him that the business guaranteed on such extension will yield a reasonable profit, to make an order directing such extension, and prescribing the conditions upon which such extension shall be made. Failure on the part of the company to obey such order shall render it liable to a penalty of $500.

Other sections provide for the payment of damages for the destruction of shrubs and ornamental trees by the telephone companies, and for the prevention of fires in forest areas through which any telephone lines may be constructed.

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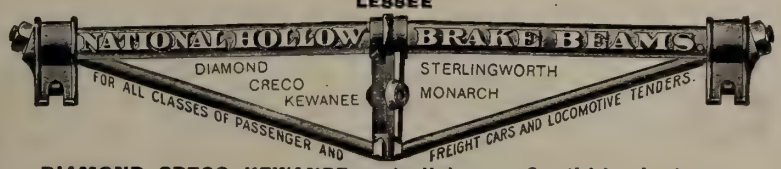

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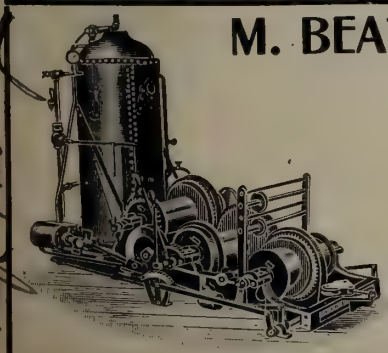

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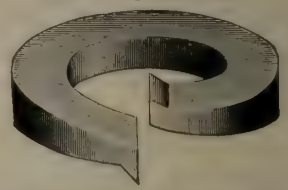

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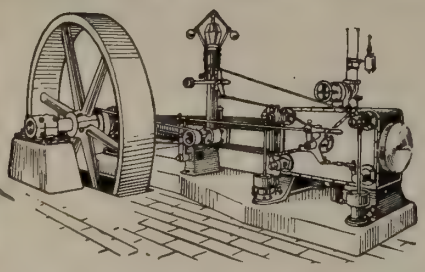

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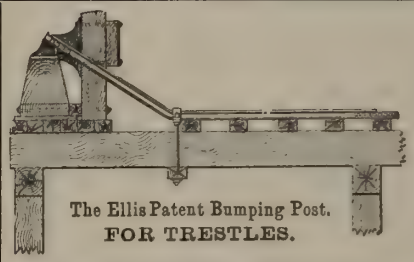

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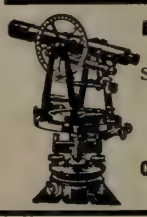

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First-Class Tugs for Wrecking, Raft Towing, etc. Steam Pumps, Divers, Jacks, Hawsers and Lighters

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G. S. Wood.....Chicago, Ill.

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Butterfield & Co.....Rock Island, Que.

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John Date.....Montreal.
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Acton Burrows Limited.....Toronto.

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Vulcan Iron Works Co.....Toledo, Ohio.

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W. Abbott.....Montreal

Drills, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Drills, Electric
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Rock
Chicago Pneumatic Tool Co.....Chicago, Ill.

Drills, Twist
Baldwin Steel Co.....New York.

Dry Goods
The Hudson's Bay Co.....

Dump Cars (Contractors')
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Dust Guards
Soule Raw Hide Lined Dust Guard Co., Boston.

Dynamo and Electric Castings
American Brake Shoe & F'dry Co..Mahwah, N.J.

Economizers
Babcock & Wilcox (Ltd.).....Montreal.

Electric Car Route Signs
Acton Burrows Limited.....Toronto.

Electric Cranes
Babcock & Wilcox.....Montreal.
Canada Foundry Co.....Toronto.
E. F. Dartnell.....Montreal.
Dominion Bridge Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Electric Ry. Brake Shoes
American Brake Shoe & F'dry Co..Mahwah, N J.

Electrical Fuses
Standard Explosives Limited.....Montreal.

Enameled Iron Signs
Acton Burrows Limited.....Toronto.

Engineers' Supplies
Canadian Fairbanks Co.....Montreal.

Engines, Automatic
Robb Engineering Co.....Amherst N.S.

Engines, Corliss
E. Leonard & Sons.....London, Ont.
Robb Engineering Co.....Amherst, N S.

Engines, Gasoline
Canadian Fairbanks Co.....Montreal.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.

Engines, Hoisting
M. Beatty & Sons.....Welland, Ont.

Engines, Stationary and Marine
Canada Foundry Co.....Toronto.
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst N S.

Excavators
Vulcan Iron Works.....Toledo, Ohio.

Explosives
Standard Explosives Limited.....Montreal.

Express Office Signs
Acton Burrows Limited.....Toronto.

Feedwater Heaters
Canadian Fairbanks Co.....Montreal.
Robb Engineering Co.....Amherst, N.S.

Fencing
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co..Owen Sound, Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

Fence Posts, Preservative
Carbolite Carbolineum Co.....Toronto.

Fire Brick
W H. C. Mussen & Co.....Montreal.
F. B. Stevens.....Detroit, Mich.

Fire Clay
F. B Stevens.....Detroit, Mich.

Flags
The Hudson's Bay Co.....

Flour
The Hudson's Bay Co.....

Flue Cutters
Chicago Pneumatic Tool Co.....Chicago, Ill.

Flue Rolling Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Forgings
Canada Car Co., Limited.....Montreal
Crossen Car Mfg. Co.....Cobourg, Ont.
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
Standard Steel Works.....Philadelphia, Pa.

Foundry Facings
F. B. Stevens.....Detroit, Mich.

Foundry Supplies
F. B. Stevens.....Detroit, Mich.

Fuse Batteries
Standard Explosives Limited.....Montreal.

Fuse Detonators
Standard Explosives Limited.....Montreal.

Gaskets
McCord & Co.....Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co.....Hamilton, Ont.
Canada Foundry Co.....Toronto.
McGregor Banwell Fence Co....Walkerville, Ont.
Owen Sound Wire Fence Co..Owen Sound, Ont.
Page Wire Fence Co. Ltd.....Walkerville, Ont.

Gauges, Locomotive Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Gears (Heavy)
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Glue Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Grain Elevators
John S. Metcalfe Co.....Chicago, Ill

Groceries
The Hudson's Bay Company.....

Hammers
James Smart Mfg. Co.....Brockville, Ont.

Hammers, Calking, Chipping and Riveting
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co.....Chicago, Ill.

Handcars
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Hardware
The Hudson's Bay Co.....
Rice Lewis & Son.....Toronto.

Hats
W. H. Coddington.....Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co.....Toronto.
Pyle National Electric Head Light Co.Chicago, Ill.

Headlinings
Crossen Car Mfg. Co.....Cobourg Ont.

Hoisting Machinery
Brown Hoisting Machinery Co....Cleveland, Ohio.

Hoists, Pneumatic Geared
Chicago Pneumatic Tool Co.....Chicago, Ill
Independent Pneumatic Tool Co.....Chicago, Ill

Hollow Staybolt Iron and Steel Bars
Falls Hallow Staybolt Co..Cuyahoga Falls, Ohio.

Hoppers, Car (Wet or Dry)
Duner Co.....Chicago, Ill.

Hose, Air Brake and Steam
G. S. Wood.....Chicago, Ill.

Hose, Suction
Chicago Pneumatic Tool Co.....Chicago, Ill.

Hydrants
Kerr Engine Co.....Walkerville, Ont.

Illustrations
Acton Burrows Limited.....Toronto.

Inspections
R W. Hunt & Co.....Montreal.

Instruments, Surveying and Engineering
Eugene Dietzgen Co.....New York.
James Foster.....Toronto.

Interlocking Signals
Montreal Steel Works.....Montreal.

Iron and Steel Bars
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.

Iron, Bar
Homer Taylor.....Montreal.

Iron, Pig
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville Ont
Jas W. Pyke & Co.....Montreal
St Thomas Brass Co.....St. Thomas. Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago Ill.
McCord & Co.....Chicago Ill

Kalsomine Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Lager Beer, &c.
E. L. Drewry.....Winnipeg

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton Ont

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal
Homer Taylor.....Montreal.

Locomotives (Compressed Air)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa

Locomotives (Electric)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal

Locomotives (Logging)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont

Locomotives (Rack)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.
Flannery Bolt Co.....Pittsburg, Pa.

Lubricators
McCord & Co.....Chicago. Ill
Homer Taylor.....Montreal.

Machine Tools
W. Abbott.....Montreal
Canadian Fairbanks Co.....Montreal.

Machine Screws, Set Cap and Planer
John Morrow Machine Screw Co.....Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis

Machinery, Power
Jno. McDougall,Caledonian IronWorks Co.Montreal

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.

Motors
McCord & Co.....Chicago, Ill.

Motors (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co.....Newark N.J.

Nuts, Cold Pressed
John Morrow Machine Screw Co.....Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto

Oil Furnaces
Railways Materials Co.....New York.

Oil Tanks
S. F. Bowser & Co., Limited.. .....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.... ...Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co. .New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens..... ..Detroit, Mich.

Ploughs, Contractors'
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Limited.....Toronto
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
W. H. C. Mussen & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada .....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co..... ....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Machines
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co. .....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scrapers (Wheel and Drag)
Bechtels Limited.....Waterloo, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal

Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal

BABCOCK & WILCOX
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PATENT WATER-TUBE BOILERS
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The Purchasing Agents' Guide—Continued.

Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co....Boston Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal.

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
W. H. C. Mussen & Co.....Montreal.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co.Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Valves, Angle
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Automatic Float
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-AndersonValve SpecialtyCo ,Pittsburg, Pa.

Valves, Cushioned, non-return
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Reducing
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Columns
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
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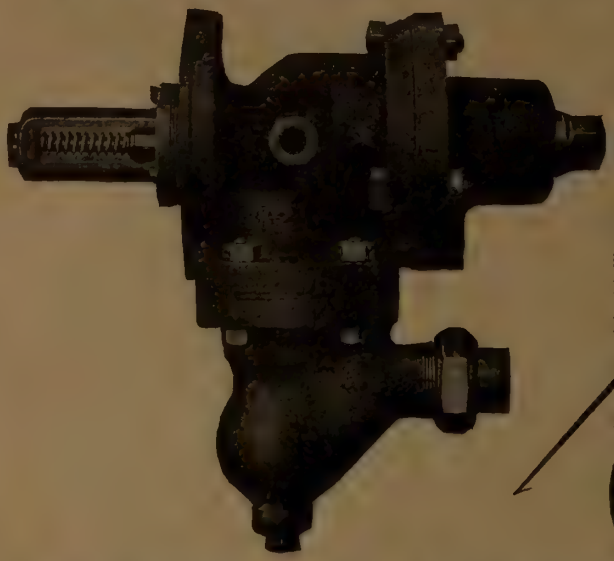

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Old Series, No. 194 New Series, No. 116. TORONTO, CANADA, OCTOBER, 1907. For Subscription Rates, See page 753.

The Use of New Electric Illuminants in Railway Service.

By John Shaw, Assistant Electrical Engineer, C.P.R.

The lighting of a modern railway system is of important commercial interest, and it can be readily realized that the annual expenditure on this service amounts to a considerable sum. In general, lighting of railway premises is not always given the consideration which its importance should receive, which may be due to the subject not having been sufficiently studied in its effects on every branch of railway service. It might not be out of place to refer to one or two of these branches, for instance: In modern freight yards a large loss is suffered yearly through theft, which cannot be prevented unless watchmen are assisted by the proper illumination of tracks and boundaries of yards. Then again the loss of life in a single year due to faulty lighting of crossings, switches, stations, and other locations adds to the ever-increasing demands against the claims department. Or take the better class of work bound to result from giving roundhouse men the best of illumination in order that they may give proper attention to petty repairs on one of those wonderfully intricate pieces of mechanism, the modern locomotive, during one of its breathing spells on a severe winter's night, which if overlooked might lead to the loss of many lives. A material saving in operating expenses would in all probability be made by a very small expenditure on properly designed lighting.

However, it should be realized that it is not light that is required usually, but illumination. It is not the quantity of visible rays emanating from a light source, but the amount of light which reaches the object it is desired to see, that is, the illumination produced by the light, which is of importance. This is an error which the makers of electric lights fell into from following too closely in the footsteps of the gas industry. It has been the endeavor to generate light and leave out of consideration the importance of the utilization of the light so as to get illumination. This not only depends upon the power of the light itself, but on the reflector, the color and character of the surrounding substances, and the position of the object to be illumined in relation to the light. Under most ordinary circumstances, the objects to be illuminated lie either in a horizontal or vertical plane. At a railway station, for example, the station platforms are of the former type, and the station walls, car sides, and ends, of the latter.

Again, in producing illumination either direct lighting or indirect lighting may be used. In general, it can be said that any method of indirect lighting wastes a considerable amount of light. Light is lost by absorption varying with color. If reflected from the walls or ceilings of a building, it is obvious that a higher efficiency is obtainable with white than with black or colored walls from the same source of light, so that care should be taken to make all white or of light colors in all offices where intensity of illumination is the chief consideration. It is not always feasible to have light walls, especially in machine shops or foundries. The walls always change to the color of the carbon or iron used therein, brownish yellow if the former, or reddish brown if the latter. Both of these colors are produced by light waves of long wave length. Therefore, where reflected light is required in buildings with walls of above colors, then a source of light giving long waves will be the most efficient. This is easy to verify by comparing the illuminations from a mercury vapor lamp with that of a flaming arc lamp, where there is an absence of reflected light with the former due to the short wave length of the bluish green mercury arc, whereas with the latter even the grimy walls of a blacksmith shop will gradually reflect a certain quantity of light and improve the illumination. The mercury vapor lamp will therefore have one of its strongest fields in the open, about station platforms, where the vegetation will give better reflection than with the yellow of the incandescent lamp.

W. KENNEDY

Master Mechanic, Middle and Southern Divisions, Grand Trunk Railway, and President Central Railway and Engineering Club of Canada.

In view of the growing demand for improved and more efficient as well as economical lighting, which has been made possible by advances made in electric illuminants, it might be of interest to describe the new lamps which have recently been devised. For a number of years the standard light, which has become so familiar, has been the 16 c.p. incandescent lamp, consuming 54 watts of electrical energy (approximately 1/13 of a h.p.) or 3.5 watts per c.p. Progress has been made in the way of minor improvements in the process of manufacture, with consequent increase in the life of lamps and the reduction of their cost. Any radical improvement within the last few years seemed improbable; however, in 1905 a so-called metallized filament was introduced by one of the leading incandescent lamp manufacturers, in which by subjecting the ordinary carbon filament to a temperature of between 3,000 and 3,700° C, it was apparently transformed to the metallic state. These filaments when made up into lamps were then found to be capable of producing light with an efficiency of 2.5 watts per c.p., or a gain of 28% over the older lamp.

Improvement and research were very active following this discovery, with the result that the tantalum lamp quickly followed. Tantalum, one of the rare earth metals which do not possess the high resistance quality of carbon, makes necessary a comparatively long and fragile filament in lamps designed to operate on the usual 110 volt lighting circuit. The filament of this lamp is therefore supported on a spider in such a way that the horizontal candle power is much greater than that of the carbon filament lamp. Used in a vertical position, a horizontal candle power is thus obtained for 2 watts of electric energy, or a gain of 43% in efficiency over the 3.5 watt carbon lamp. This lamp as yet has only been developed to operate successfully on direct current, an alternating current apparently disintegrating the filament more rapidly.

More recently still, experimenters have succeeded in producing lamps with a filament of another rare earth, now largely used in high speed tool steel, namely, of metallic tungsten, which carry the standard

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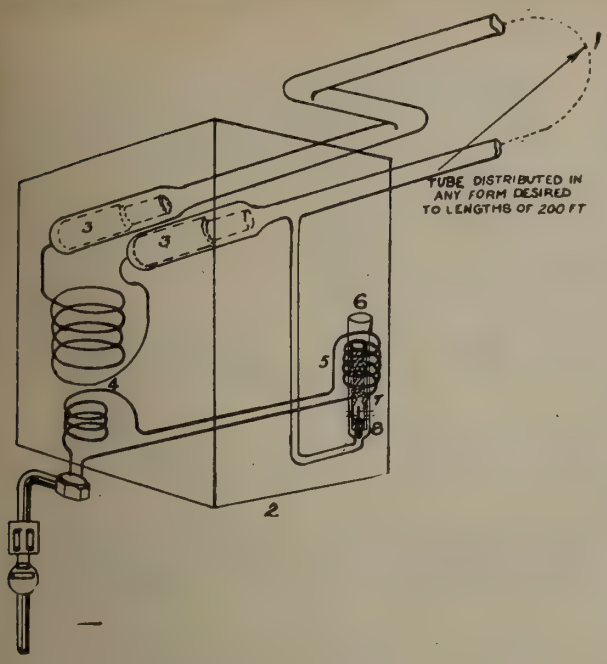

FIG. 1. DIAGRAM SHOWING ESSENTIAL FEATURES OF THE MOORE LIGHT.

1. Tube. 2. Terminal tube. 3. Carbon electrode. 4. Step up transformer. 5. Solenoid. 6. Inlet tube. 7. Solenoid core. 8. Carbon plug.

of efficiency to a point far beyond that obtained with tantalum lamps. Those lamps, which are now only obtainable in limited quantities, are hardly a commercial success, owing to the great care which is required in their handling, due to their extreme brittleness. An efficiency of approximately one watt per candle power is obtained with these lamps, or 70% over the carbon filament lamp. As yet no lower candle power lamp has been produced below 25 c.p. for 110 volt circuits. It is claimed that a life of 3,000 hours has been obtained, without any serious loss in candle power throughout this period, with the tungsten lamp. It can readily be realized that when these lamps become a commercial success no difficulty whatsoever will be met in obtaining abundance of light at a very low cost compared to existing conditions.

A corresponding improvement has been taking place very recently in the case of the larger unit of light, the arc lamp. In spite of the radical changes in electrical industries, the electric open arc lamp as produced by Sir Humphrey Davy in 1808, to the 150 hour enclosed lamp to-day, progress has been confined more or less to mechanical improvements, the candle power of the open arc being almost double that of the enclosed arc taking the same energy. In the open and enclosed arc lamps the carbons are solid and comparatively free from impurity, the arc being approximately one-eighth and three-eighths of an inch long in the two lamps respectively. In the new flaming arc lamp, on the other hand, the carbons are cored and mineralized, that is to say, provided with certain substances, either in the core or in the body of the carbon, or both, which when feeding into the arc, greatly increase the light-giving efficiency of the latter. Certain fumes are given off by the burning of the minerals in the arc, which is one of the principal drawbacks of the lamp, preventing it being used in enclosed spaces. An additional disadvantage is the rapid rate at which the carbons are burnt away. In the largest burning lamps carbons require to be renewed every 16 hours. The efficiency of the arc is as much as five times that of the enclosed arc lamp. Endeavor is now being made to produce a magazine lamp in which several sets of carbons would replace one another automatically, but as yet no success has been achieved. This latter drawback is an important reason against their adoption for use in train sheds or foundries where the lamps can be used to greatest advantage owing to the fog or smoke penetrating powers of their light. In addition, lamps must be hung comparatively high to obtain best results. Another form of this lamp overcomes this trouble, namely, the magnetite lamp, which has a life of 150 hours per trimming. In this lamp only one mineralized electrode made up of the metal magnetite is used, the other electrode consisting of a short piece of solid copper, which requires renewing every 3,000 hours. This lamp, however, is limited for service on pulsating direct current only.

The greatest advance, however, in artificial illumination has been in the production of the vapor lamps. The best known and developed lamp of this type is the Cooper Hewitt mercury arc, in which the light-giving element is a gaseous vapor of mercury. This vapor is enclosed in a hermetically sealed glass tube, varying in length from 17 to 45 ins., and about 1 in. in diameter. Lamps are made to operate both on alternating and direct current circuits. The large lighting surface is one of the most important features of the lamp. It prevents the formation of sharply defined lights and shadows, and produces a good diffusion of the light. As the lighting body is a gas, it is not worn away, but only ceases to act upon failure of vacuum. Life of tubes is usually guaranteed for 4,000 hours, but they have been known to burn 10,000 hours. The objectionable feature of the light is its greenish shade where colors require to be determined, but its color is the one giving most ease to the eye. Owing to its diffusive power, the lamp is one best suited for drafting offices, where all shadows may be eliminated by its use, and, due to its color, lines and figures on blue prints are more sharply defined than with a reddish light. The characteristics of the light renders it specially valuable for the making of blue prints.

Another vapor lamp rapidly gaining favor, especially in the neighborhood of New York, the home of its inventor, is the Moore light. It, briefly, consists of a continuous glass tube of 1.75 ins. diameter, in lengths from 20 to 200 ft., the terminals of which are placed in a rigid steel box, as shown in figure 1. Beside the two carbon electrodes of the tube, the box contains a step-up transformer and a small valve. The function of this valve is to permit air or other gas to enter tube only when it is required, automatically. In normal operation, air is admitted one second each minute. Almost any color of light is obtainable by varying the atmosphere in tube, air producing a soft pink, nitrogen a yellow, and carbonic acid gas a pure white light. The life of the light is practically indefinite, and the conversion of energy into light is so efficient that practically no heat is transmitted to the tube. The use of this light would be specially adaptable for large station rotundas, halls, or waiting rooms. The efficiency of vapor lamps is extremely good, averaging 0.7 watts per c.p., and a considerable gain in economy with improved illumination is obtained thereby.

The remaining illuminant, to which reference must be made, is the Nernst lamp, now being introduced widely. This light is made up in units of from two to six glowers, with an average candle power at 45° below the horizontal from 100 with two glowers to 360 candle power with the six-glower lamp, and a corresponding current consumption of 185 and 560 watts respectively, or an efficiency of 1.7 watts per candle power. As yet the Nernst is only available for commercial operation on 220 volt alternating current circuits, unless a step-up transformer is used. One of the chief applications of the lamp is for locations where a concentrated unit of light of greater intensity than the incandescent is desired, and where the arc lamp would be objectionable on account of its fluctuating propensity and constant renewal of carbons. It must be mentioned, however, that the Nernst lamp requires periodical attention, and that glowers have an average life of 800 hours.

In deciding on the best light for any particular installation, amongst the several features which should be considered are, namely: 1. The intensity of illumination required. 2. The nature of surroundings or color of walls if an interior. 3. The necessary location of lights. 4. The most economical light as regards current consumption, maintenance and attendance to give the required illumination. 5. The class of work to be carried on.

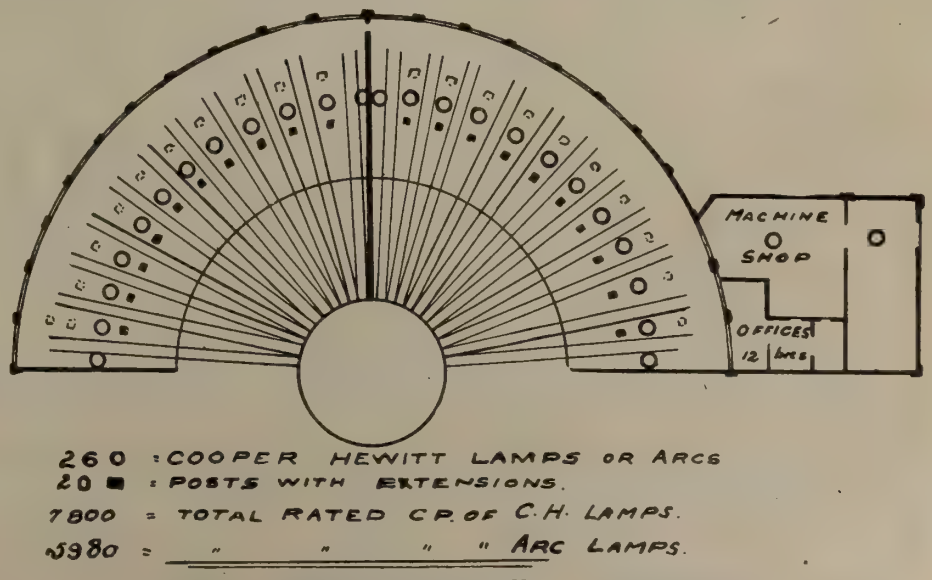
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FIG. 2. LIGHTING LAYOUT FOR 22 STALL ROUNDHOUSE.

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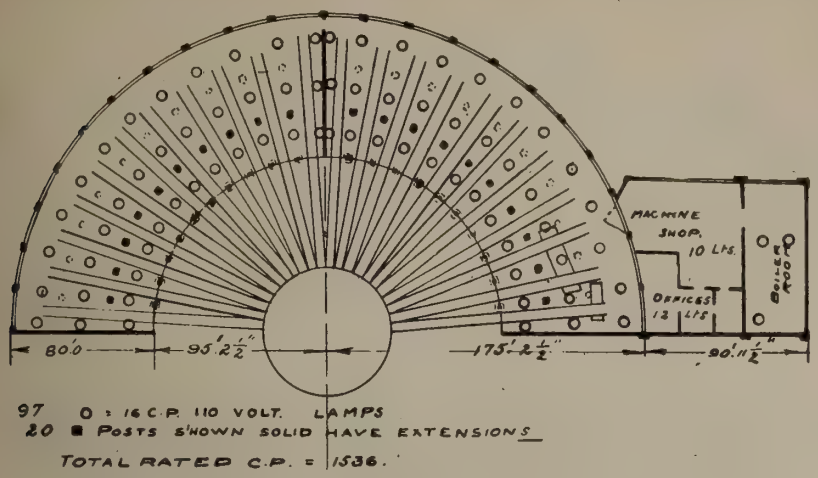

FIG. 3. LIGHTING WITH 16 C.P. LAMPS FOR 22 STALL ROUNDHOUSE.

As an illustration, consider the illumination of a railway roundhouse of 18 stalls, with locomotive foreman's office, machine shop and boiler plant, where direct current power is generated from an engine generator unit supplying current for lighting all railway premises as is usually the case at a divisional point. No assistance is to be obtained in reflection on account of the dull black non-reflecting surfaces of the engines, smoked walls and roof, therefore it is necessary to install a comparatively large amount of candle power to obtain sufficient illumination, even to produce a feeble effect. It has been the practice to install incandescent or arc lamps for this purpose, placing either an arc lamp between each stall, as shown in figure 2, or three incandescent lamps as in figure 3, with one receptacle for extension cord with portable lamp. The objection to the use of the former has been the large maintenance cost due to the gases in roundhouse destroying the various metal parts of the lamps. With incandescent lamps, on account of the smoke and usual handling, a very small percentage of light is usually given by lamps a short time after installation, unless proper supervision is exercised to have the lamps kept clear. Another trouble also met with is the carrying away of lamp and supporting cord due to lamps being placed about locomotive or in cab and not removed previous to engine leaving house. Recently the mercury vapor lamp, which is made up in specially protected form for use in locations where liable to be attacked by corrosive fumes, has been tried with success for roundhouse illumination. An approximate comparison of the inital cost of illuminating a roundhouse, as shown, is as follows: Incandescent, $750.00; arc, $1,450.00; Cooper Hewitt, $1,650.00.

OPERATING COST.

	Maintenance.	Current.	Total.
Incandescent.....	$125.00	$1,090.00	$1,215.00
Arc.....	265.00	2,230.00	2,495.00
Cooper Hewitt....	260.00	1,000.00	1,260.00

COMPARISON OF CANDLE POWER.

	Rated c.p.	C.P. per sq. ft.	Watts per sq. ft.
Incandescent.....	1536	0.04	0.16
Arc.....	5980	0.16	0.38
Cooper Hewitt....	7800	0.21	0.15

It will be noticed that, although the cost of installation is highest with the mercury vapor lamp, the annual cost is about equal to the incandescent installation, but with five times the candle power.

Consideration of the lighting of another type of building, namely, of a locomotive erecting and repair shop, might be given as a further illustration of the relative costs of the different illuminants. Assuming a shop whose dimensions are 1,170 by 162 ft., with gallery along one side 25 ft. in width, and shop divided into longitudinal sections by supporting columns of roof structure, with travelling cranes operating in each section, requiring lamps for general lighting to be placed 40 ft. above floor.

The annual cost and illumination to be obtained using a combination of series direct current arc lamps, enclosed alternating current lamps, and incandescents, as against flaming arcs and incandescents for individual machine lighting, to mercury vapor lamps, would be approximately as follows:

	Cost	Maintenance	Current	C.P.
(1) 50-9.6 amp. d.c. arc lamps and motor generator... 80-enclosed a.c. arc lamps 2500-16 c.p. lamps.....	$9,890.00	$1,400.00	$11,250.00	74,000
(2) 50-10 amp. flaming arc lamps..... 40-enclosed a.c. arc lamps 1500-16 c.p. lamps.....	9,750.00	2,900.00	8,110.00	94,000
(3) 110-700 c.p. Cooper Hewitt lamps..... 112-300 c.p. Cooper Hewitt lamps..... 500-16 c.p. lamps.....	11,600.00	2,800.00	10,300.00	118,600

Other installations might be discussed, but as each individual case usually has certain limiting or special features requiring consideration, no general purpose would be gained by doing so.

In conclusion, it may be said that it seems certain that the electric lighting industry is now passing through a complete change of almost revolutionary character. The standard of incandescent lighting efficiency will be brought by the tungsten lamp to a position three times above that at present. This means that the efficiency of all other incandescent lamps and enclosed arc lamps will be surpassed, and that with the exception of the vapor, magnetic, and flaring arcs, the tungsten lamp will be the most efficient and simplest of electric illuminants. As dull tools are no longer tolerated in a modern industrial establishment, the question will soon be active, why allow dull lighting to exist?

The foregoing paper was read at a meeting of the Canadian Railway Club recently.

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F. G. Martyn, Assistant Superintendent Terminals, C.P.R., Toronto, born at Bury, Que., Oct. 7, 1848.

G. Olds, ex-General Traffic Manager C.P.R., born at Stapleton, Gloucestershire, Eng., Oct. 29, 1832.

H. Paton, President Shedden Forwarding Co., director Bell Telephone Co., Montreal, born at Johnstown, Renfrew, Scotland, Oct. 5, 1852.

D. Pottinger, General Manager Canadian Government Rys., Moncton, N.B., born at Pictou, N.S., Oct. 7, 1843.

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Toronto Union Station, Tracks, etc.

Following is the balance of the report of W. Barclay Parsons, New York; C. B. Smith, Toronto, and C. H. Rust, City Engineer of Toronto, to the Toronto City Council on this question. The first portion of the report was published in our last issue.

The disadvantages are: 1. That the raising of the station would place the tracks westerly of it at such a height as to require the abolition of the John St. bridge; 2. The existing freight yards would have to be reconstructed; 3. The shifting and delivery facilities on the Esplanade reduced; 4. Crossings of the shifting tracks on the Esplanade would still remain; 5. Greater cost. As to the separation of streets and railway by street bridges, the advantages are: 1. No interference with existing tracks; 2. Delivery facilities on the Esplanade can be increased; 3. A less cost; 4. Better appearance to persons approaching from the water. The disadvantage is: That some streets will be cut off before reaching the water. This probably will result in property owners abutting upon the Esplanade claiming damages for the closing of these streets. In discussing the advantages and disadvantages we have not alluded to the question of damages. In all probability, judging from what has happened in other cities, the property owners, in the event of a viaduct being constructed, will set up alleged claims for damages to their property. We are so firmly of the opinion that all level crossings of streets and tracks should be eliminated, that we recommend, in the event of street bridges over the railways being adopted, that the main running tracks east of Yonge St. be fenced as far as Parliament St. This will present the same facilities for unobstructed train speeds as the viaduct would. On the other hand it would abolish the private crossings from the south side of the Esplanade as efficiently as the viaduct, and the cost, if any, of such abolition would be equally a charge against both projects.

We have estimated that the cost of track elevation from Bathurst St. to a point east of Queen St. on the G.T.R. would be substantially $3,000,000. This provides for a four-track viaduct from Yonge St. eastwardly to Parliament St., where the C.P. and G.T. lines separate. We have assumed that this work will be carried on a concrete-filled viaduct with bridges at every street opening 66 ft. wide. The portion east of Parliament St. on the C.P.R. would be a two-track viaduct running down to the present grade near Queen St. This would give subway crossings at Front and Tate Sts., and probably with the slight depression of the street a subway could be constructed at Eastern Ave. On the G.T.R., east of Parliament St., a two-track embankment constructed eastwardly a distance of 7,600 ft. This will provide for subway crossings at Eastern Ave and Queen St. We have also provided for elevating all the tracks south of the proposed station for a width of about 500 ft. This width going west is gradually decreased until it assumes the normal width of four tracks at John St., which width continues to Bathurst St. A ramp is provided for on the north side to reach the G.T.R. passenger coach yard on a one per cent. grade. From the diamond crossing immediately west of the Strachan Ave. bridge to the Humber River we have taken the plan and estimate prepared by J. Hobson, Chief Engineer of the G.T.R., who provides for four tracks and gives the total cost of the work at $1,000,000. This estimate does not, however, provide for a bridge at the Queen St. crossing at Sunnyside, which would cost, including land damages, about $100,000. This plan provides for the depression of the tracks commencing at the diamond crossing and running westerly to Queen St. The tracks would be depressed sufficiently to provide for over head bridges at intersecting streets. From Queen St. crossing at Sunnyside west to Humber it is proposed to have the track elevated, and under-crossings could be constructed into High Park, and also at the various streets west of this point, which are in the municipality of Toronto Jct. If this work were carried on with only two tracks as at present, it would probably cost not more than $500,000. The large additional cost is caused by the right-of-way that would be required for the construction of the two additional tracks. The total cost, therefore, to abolish grade crossings and to elevate the tracks throughout the city, from the west city limit at the Humber to a point east of the Queen St. crossing on the G.T.R., would be approximately $4,000,000. This does not include any amount for the reconstruction of the yards, re-laying of the tracks along the Esplanade, delays and inconvenience to travel pending the reconstruction, nor have we included any allowance for possible abuttal damages incident to the construction of a raised viaduct in the center of Esplanade St. For both projects there might be some abuttal damage to obliterate private rights crossing the tracks at grade.

The cost of five overhead bridges, including one at Yonge St., would be about $800,000. This estimate includes an allowance for the damages to abutting property.

The question as to what proportion of the cost of this work should be borne by the City is, we consider, a matter of policy to be determined by your Council, but we would point out that in the construction of the York St. bridge, the City paid one-third of the cost, and we would suggest that, if the tracks are elevated, the City should not be called upon to bear any larger amount of expense of the work than they would have to do if it were decided that overhead bridges were the best solution of the problem.

C. B. Smith has since made the following supplemental report: In reference to the report re separation of grades in connection with the railways along the waterfront, signed by Messrs. Parsons, Rust and myself, my attention has been called to what may appear to be an ambiguity in statement, and, as it is, I consider very desirable that there should be an understanding on the matter of cost of a system of separation of grades, either by subways and bridges, or subways and viaduct, I beg to append the following comparative table showing the approximate cost of grade separation by either method. In our joint report reference was made to the fact that our estimate did not include an amount for the reconstruction of the yards, relaying the tracks along the Esplanade, etc., and although such an estimate must of necessity be approximate, I consider that it is only fair that you should be advised of the possible magnitude of the same, and I have accordingly added in the table my personal estimate of what this will amount to, viz., $500,000. This amount, you will understand, does not include any sum for damages or for inconvenience to railways or the public.

Table of comparative estimated costs of separation of grades in Toronto, extending from Swansea on the west to and including Queen street crossings of the C.P.R. and G.T.R. on the east:

	With Viaduct on Esplanade and Eastward	With Bridges on Esplanade
Track depressions through Parkdale, Sunnyside bridge and track elevations at High Park, Four tracks	$1,100,000	$1,100,000
Two tracks	600,000	600,000
Four track viaduct, etc., Bathurst street to, and including subway at Queen street east	3,000,000	
Track, yard and building reconstructions due to viaduct (estimate C. B. Smith)	500,000	
Five overhead bridges across Esplanade street		800,000
Subway over G.T.R. at Queen street and Eastern avenue		$ 60,000
Bridge over C.P.R. and Don River at Queen street	$ 200,000	200,000
Total if western entrance for—		
Four tracks	4,800,000	2,160,000
Two tracks	4,300,000	1,660,000

BOARD OF TRADE REPORT.

The following report has been made to the Toronto Board of Trade by R. M. Berrian, of Boston, Mass., and J. W. Moyes, of Toronto: Having regard for your instruction for a report giving a solution of the Esplanade difficulties presenting themselves in the City of Toronto, beg to say: That a close personal investigation has been made, extending from Scarboro Bluffs on the east, to the Humber on the west, and a thorough going into the merits and claims of the railway companies regarding the present location; then having in view the personal safety of the citizens, and the providing of means that would give to Toronto a much needed free use of a developed water front, as well as afford perfect facilities for the railway needs. The situation appears to be capable of solution in two ways: 1. The elevation of the streets; 2. The elevation of the railways. A concise presentation of the merits of each would perhaps present a solution and provide for a selection.

The physical features of the southern boundary of Toronto traversed by the railways is of a complex character, and must be viewed from the standpoint of what will result in the greatest good to the greatest number, while having reasonable regard to the financial aspect of such solution.

It would appear that each of the several streets, having a southerly direction from Queen St., have access to the water front of the City, and these rights must be assumed to be maintained for the citizens in any treatment of the question. Having this in mind, then, let us see what may be done by the elevation of the highways over the railway tracks now situate on the Esplanade. A reasonable assumption would be that each of these streets have a right to the free access spoken of. In that event, then, a bridge and approaches thereto would be necessary. Commencing at the western end, say York St., we find between that and Cherry St., inclusive, 10 bridges would be necessary to reasonably serve the apparent rights now enjoyed by the citizens, but which the danger of crossing the network of railways at grade prevents their using. As the demand for a 22-ft. clearance over the rail is imperative for the operation of the railway under a street elevated over these railways, the portion of the bridge prepared for traffic would be in the neighborhood of 25 to 26 ft. above the level of the rail and surrounding ground. Assuming that a 4% grade on these approaches would be a reasonable one for vehicular operation, we are confronted by the necessity for an approach of between 600 and 700 ft. From the northerly limit of the railway tracks at Sherbourne Street the approach thereto would commence at a point north of Front and south of King St. The natural rise of ground at the highest point, Yonge St., would not entail the necessity for the approaches reaching beyond Front and Yonge St., but in each event the necessity for carrying a bridge approach to the south would mean the extension of the existing shore line some distance out towards, or even up to, the new Windmill line. If, on the other hand, the approaches to the bridges were carried at right angles, then

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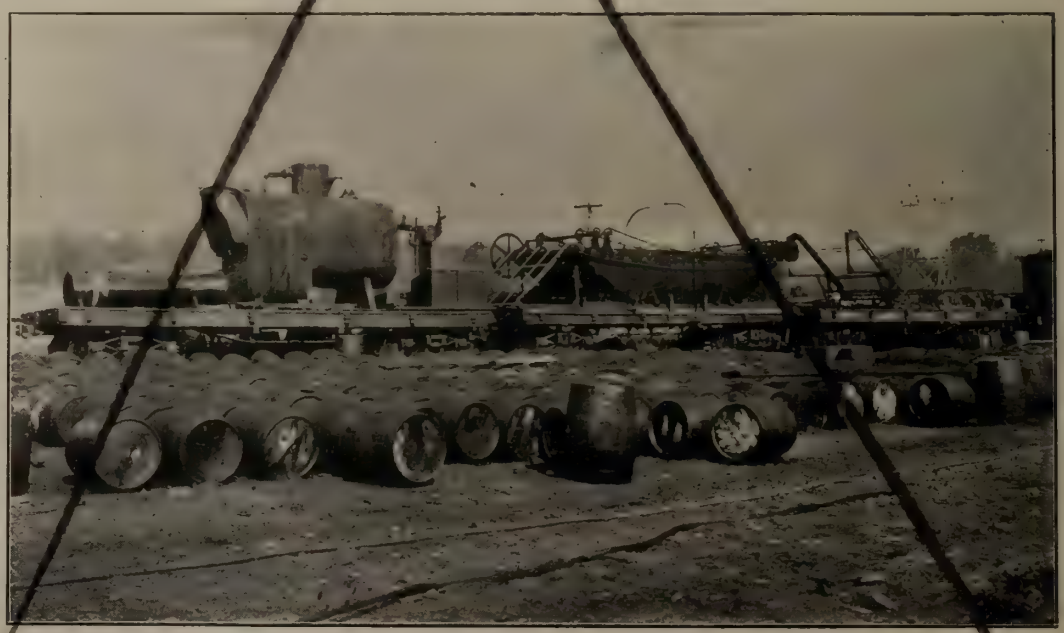
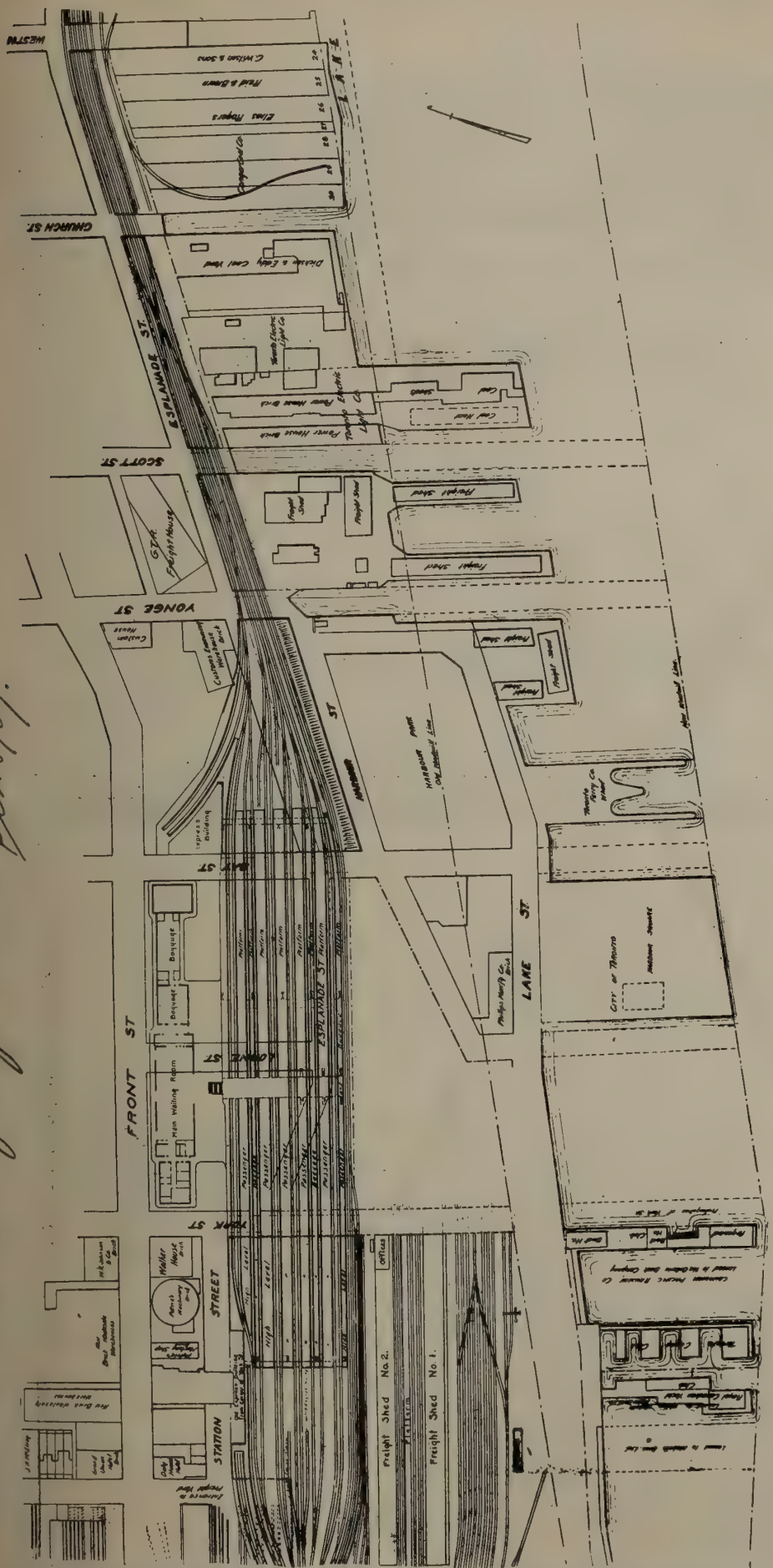


PORTABLE TIE TREATING PLANT No. 1—(Single)



such approaches could only be constructed with serious invasion of the acquired rights of property holders in that neighborhood. In the event of construction, giving a straight approach for these bridges, being decided on, then the completion of a bridge scheme, providing for access to the water front of Toronto, must, of necessity, be deferred for many years to come. The comfort of the citizens would be seriously interfered with, not only by the ascent and descent of the approaches, but also by the inconvenience caused by smoke, and trains passing under these bridges, to both pedestrians and vehicular traffic. There is a serious feature in the bridge question affecting Toronto's commercial welfare, as the lifting of water-borne traffic over these bridges must add to the cost of transportation, by a sum of money per ton, that would militate seriously against Toronto's welfare, and this phase must become more acute as the years go by, and Toronto's magnificent water front opportunities from Ashbridge's Bay west, are developed in a proper manner.

Another solution of the situation is to be found in a viaduct plan which would commence immediately east of Bathurst St. and terminate east of Cherry St. near the River Don in the east end. Under a viaduct arrangement of the Esplanade all trains passing through Toronto would be carried at an elevation and thereby provide free access at every street on the whole of the water front on the existing natural level, there being no need of legal imposition on vehicular, pedestrial or street car traffic as obtains with railway traffic; the altitude of the structure would be very considerably less than that of a bridge, providing for surface operation of railways on the Esplanade. Such a structure would invade no right along the entire Esplanade, providing a street were laid out immediately south of the proposed viaduct. A viaduct would be available for the use and protection of the citizens, and the aiding of Toronto's commercial interests, at a much earlier date, than the suggested bridge plan. Its first cost would be practically all the charge that would be against it, and a solution for all time to come of these frontage difficulties, which have continually beset Toronto's best interests in the past. You will notice from an inspection of the plan that no private or other interests on the Esplanade proper will be affected; all existing switches and easements thereto are conserved by a surface track maintained east of Church and south and north of the proposed viaduct for their sole benefit and use. Practice has demonstrated that traffic of this nature can be maintained, under proper regulation, with every safety. Having in mind the least possibilities for damage costs in connection with the bridge scheme, for the reasons before given, an average of $200,000 each would be a very modest estimate of the cost of the bridges, but the interest account covering the fixed charge for cost must be augmented by a yearly sum covering maintenance and renewal accounts.

A viaduct between the limits previously set out, would be slightly under $2,000,000, the details of which sum accompany this.

A summary of the two plans here outlined would then present the following features: Bridge plan covering 10 streets from York St. eastward to the Don (estimated cost) $2,000,000; Viaduct plan, providing for every street having access to water front at existing street level (estimated as per detail) $2,000,000 The interest account on cost would be practically the same in each case. The maintenance and renewals account, necessitated by a bridge plan at, say 2½%, would be $50,000 a year, and would be totally absent in the case of a viaduct. The cost of extending to the Windmill line, if a straight approach to the bridges were demanded, on

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the south side, would add seriously to the above figures for a general bridge plan of the Esplanade. Careful study of every feature in connection with the Esplanade situation, of which the foregoing is a summary, leads to no other conclusion than that a viaduct is the preferable solution, giving immediate and permanent relief from the dangers besetting the citizens as well as aiding Toronto's growing commerce and making railway operation more free and much faster. With a viaduct, the question of providing a railway station suitable for the present and growing needs of Toronto becomes simplified. Such a station would be situate between York and Bay Sts. immediately south of Front, and would provide for all passenger trains from the east and west depositing their passengers on commodious terminal platforms leading to a central concourse slightly above the street level of Front St. Provision is also made in the accompanying plan for easy and rapid movement of all through trains, as well as making liberal provision for accelerating the movement of freight. The adoption of a viaduct and station plan as here presented would permit of a suburban railway train development that is not attainable otherwise, and that is one of the growing necessities of Toronto. In connection with this plan the extension of the viaduct easterly, providing for the entrance of the G.T., C.P. and Canadian Northern Railways across Queen St., can be carried out on the exact lines of the plans now presented. West of where the viaduct ends, near Bathurst St., the submerging of the railways would begin and be carried westerly towards Sunnyside, and out to the Humber, giving safe crossings at Sunnyside and into the Park. In connection with these suggested additions we desire to point out that not a single dollar of expenditure on the proposed viaduct, as submitted to you would be lost, as this plan has been prepared with a thorough belief that the eastern street traffic approaching the city must be protected, at no distant day, in the same manner and for the same cause as the proposed improvement of the Esplanade is now suggested. The plan shown on page 721, the original of which accompanied Messrs. Berrian and Moyes' report, shows the district between Church and York Sts., where they propose the elimination of all tracks on the level.

The Canadian General Electric Co. has been granted supplementary letters patent under the Dominion Companies' Act, authorizing the increase of its capital stock from $5,000,000 to $8,000,000.

An interesting item in the Labor Day procession at St. Thomas, Ont., was a fully equipped freight train. The locomotive, which was driven by the Mayor, was one of the first switch locomotives used on the old Canada Southern Ry. in 1872, and now used on the transfer in the M. C. R. shops.

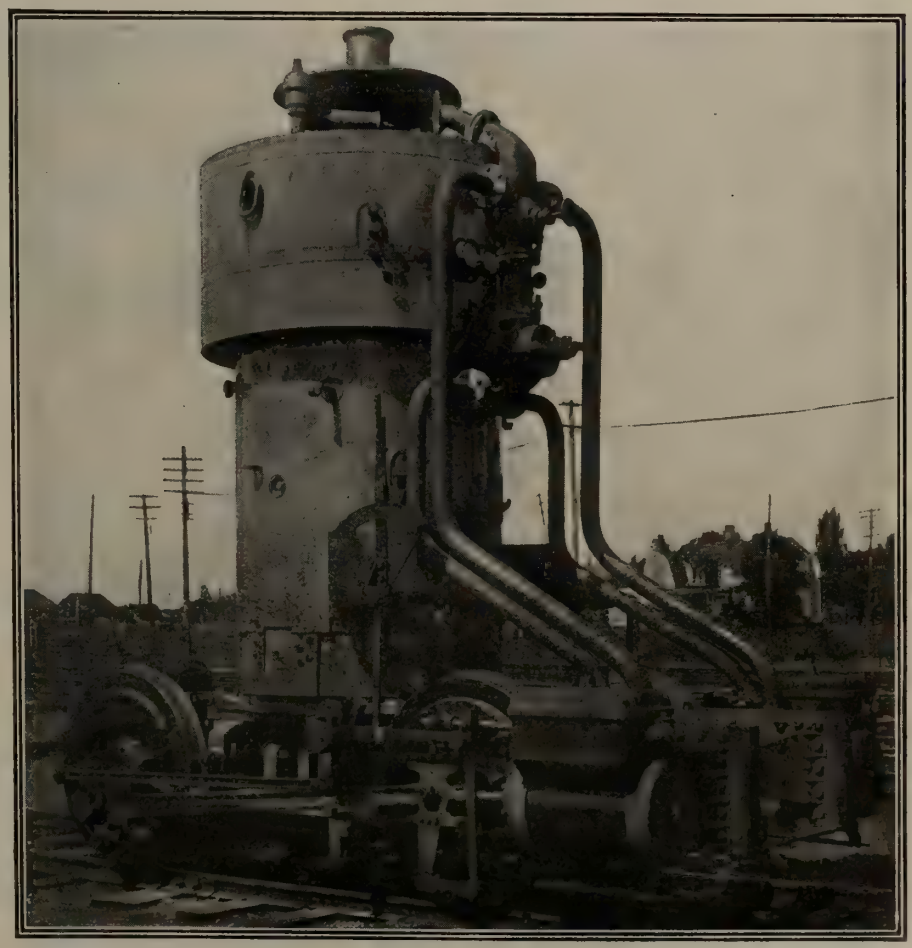
The Ozone Sterilization Co., Ltd., which has been incorporated under the Ontario Companies' Acts, with a capital of $100,000 and offices at Haileybury, Ont., to acquire and operate processes for the purification, etc., of water, liquids, air, gas, minerals, clays and ores, is among other things empowered to construct, acquire, charter, operate, hire, lease, sell or otherwise dispose of all kinds of vessels, wharves, docks, elevators, and warehouses, freight sheds and other buildings, and generally to carry on the business of an elevator, navigation and transport company, and establish, lease and operate hotels, lunch rooms, restaurants and shops. The provisional directors are: W. A. Gordon, R. O. Morrow, Miss E. M. Little, Miss M. L. Doherty, F. A. Day, Haileybury.

Quebec Bridge and Railway Co.

The annual meeting of the shareholders was held at Quebec, Sept. 3, S. N. Parent, President, being in the chair The directors, in their annual report, said:

"It may be recalled that in Oct. and Nov. last a joint meeting of all railway and steamship companies interested in the port of Quebec, including representatives of the City Council, the Quebec Harbor Commissioners, the Quebec Board of Trade, and the shipping interests, was held in the Company's office at the calling of the National Transcontinental Ry. Commissioners, at which the Dominion Government was represented by the Minister and Deputy Minister of Railways and Canals. That important conference lasted several days; sub-committees were appointed to consider the questions of railway terminals and dock facilities respectively; engineers were appointed to prepare reports, which were submitted, and after consideration the joint committee unanimously approved the Champlain Market site as terminal passenger station and the 55 ft. dock line from Lampson's Cove to the north end of Champlain Market Square, and reported accordingly to the National Transcontinental Ry. Commissioners for presentation to the Dominion Government. Recommendation was made to the Government accordingly, who afterwards convened all the railway companies in the office of the Minister of Railways to discuss the question of terminals with the Quebec Bridge and Ry. Co., so that a bill to that effect might be prepared. Owing, however, to the early departure of the Prime Minister for Europe in April last to attend the Colonial Conference, the terminal question had to be postponed. In the meantime, to satisfy our company, legislation was passed authorizing the Government to advance by way of loan $6,678,200, being the full amount of the Company's authorized bond issue. For the purpose of approving the above according to law, a resolution was adopted by the shareholders at a special general meeting, which was held Aug. 5. A copy of this resolution was sent to the Minister of Finance so that effect could be given to the new act."

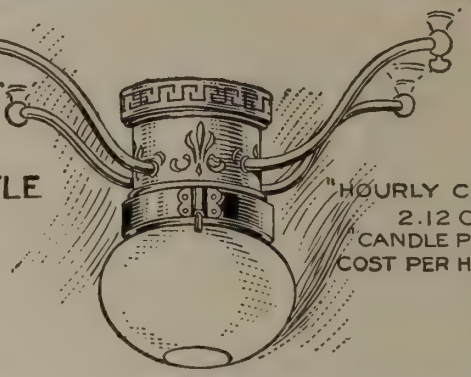
The report of E. A. Hoare, chief engineer, which was annexed, follows: "The present condition of the work on the bridge over the River St. Lawrence can be considered satisfactory. From the south side of the river, the steel superstructure erected to date extends over the river as far as the fourth panel of the suspended span, or about 1,450 ft. from the land abutment, reaching to 112 ft. of the centre of the bridge, the season's work to date being about 600 ft. Out of a total of about 38,000 tons of metal for the whole structure, only about 2,500 tons, for the north half of the suspended span, remains to be fabricated at the Phœnix Bridge Co.'s workshops. Part of the metal for the north end of the structure is still in storage at Phœnixville, Pa., which is being shipped to destination as fast as cars can be procured. A storage yard to receive this, fully equipped with craneways and electrical power, had to be installed near Belair station, on the C.P.R., at a point where it can be conveniently reloaded for transfer, by the National Transcontinental Ry. early next year, to the regular yard at the bridge. The yard at Belair was



MOTOR TRUCK, INTERCOLONIAL RAILWAY MOTOR CAR.

This illustration shows the motor truck, boiler, engine, etc., of one of the three steam motor cars which have been built for the I.C.R. and which were fully described and partly illustrated in our Sept. issue.

PINTSCH LIGHT



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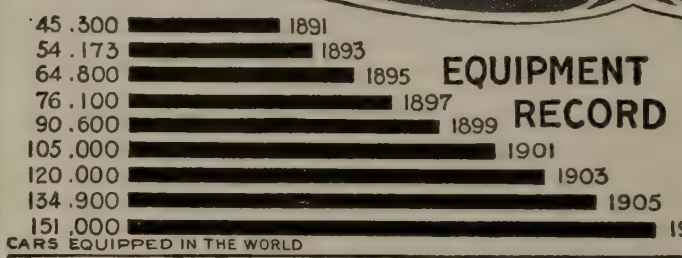

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considered necessary to store sufficient metal ahead of erection within a reasonable distance of the bridge, as the final yard will be of no service until connected by rail. The accumulation of fabricated metal at Phœnixville increased to such an extent that it became necessary to remove it as quickly as possible regardless of erection requirements, also for the reason that metal, if left too long at steel works, receives some damages from furnace gases, etc. The steel and wooden falsework for the erection of the north anchor arm will be completed this season, and protected from the ice. This is a very large and costly structure, 500 ft. long and 150 ft. high, the foundations of which are all below the tides. No work has been done on the railway approaches between Quebec and the bridge since the date of my last report, but the question has been discussed by the Government and the railway companies interested in the Quebec terminals and is under consideration."

The directors submitted the following supplementary report: "Since the above report has been prepared for this general meeting, it is the painful duty of your directors to inform you of the terrible accident which occurred five days ago, on Aug. 29, collapsing the largest part of the Phœnix Bridge Co.'s works on the south shore. There is nothing to say so soon after that awful occurrence, beyond expressing our profound grief at the loss of so many lives and our heartfelt sympathies to the bereaved families of the victims. The Government has at once taken steps towards the creation of a commission of engineers to investigate into the causes of the accident, which may be truly considered as a national calamity. The Directors believe they express the feeling, not only of the shareholders, but of the whole country, when they say that the duty of the hour is to renew all our energy with a view of the early resumption of the work. The Quebec Bridge will be finished: it is only a question of more time. There is something cheerful under such dire circumstances in the fact that we are powerfully encouraged in this hopeful view of the situation by the noble words of Sir Wilfrid Laurier in his message to the Mayor of Quebec, in which he says that the duty of the moment is not to lose courage, but to join all energies to repair the loss and continue the undertaking; and also by the sympathetic declaration of R. L. Borden, the leader of the Opposition at Ottawa, that the Quebec Bridge is a national enterprise and must be rebuilt in the shortest time possible."

Theodore Cooper, the Company's Consulting Engineer, having been made to say, in an interview with a reporter of the New York Times, that on the day of the accident, he had wired "the men in charge of the works to get off the bridge and stay off until it could be examined." The President at once telegraphed Mr. Cooper to inquire whether he had given out to the press such a statement, or any other. The answer received from the Consulting Engineer is to the effect that the interview had not been correctly reported, and that he would have it corrected immediately.

The Chief Engineer, in his supplemental report, says: "After examination, I ascertained that the piers were undisturbed, the coping levels being unchanged; the accident, therefore, was confined to the steel work alone. On the evening of Aug. 27, Mr. McLure, the Resident Inspecting Engineer, came to see me with a sketch showing that the ribs in one of the lower chords of the west truss of the anchor arm showed an inward side deflection. The matter was reported the same day to the Consulting Engineer and the Phœnix Bridge Co., but in order to avoid the delays and any misunderstanding that might arise from transmission of messages, Mr. McLure left the next morning for New York and Phœnixville to discuss the question. Soon after these interviews took place the structure very suddenly collapsed. Whether the chord in question was the cause of the accident or not, is at present undetermined. Personally, I did not see immediate danger; at the same time I considered the question of sufficient importance to send Mr. McLure to explain the situation to the Consulting Engineer and the Phœnix Bridge Co. Before Mr. McLure left he satisfied me as to the pier levels and the line of the main post, etc. A few days previously the levels were taken for deflection, which agreed with the theoretical calculations, showing that everything was working as it should do. If results had been otherwise, the conclusions would have been that something was wrong. A Government commission has been appointed to investigate and ascertain the cause of this disaster. In the meantime I must refrain from stating anything further."

The report of J. H. Paquet, Treasurer, showed that the cost of the construction of the bridge from the beginning to June 30, 1906, was $1,556,209.50, for foundations, substructure, etc., and $3,116,742.69 for superstructure. This latter amount was paid to the Phœnix Bridge Co. and $163,577 was still due that company on estimates for work completed to date.

The reports having been adopted, the following resolution was unanimously passed:

"The shareholders of the Quebec Bridge and Ry. Co., whilst regretting exceedingly the unfortunate catastrophe which has destroyed so much of their property and has caused the loss of so many valuable lives, desire to place on record their sense of the increasing importance of the bridge to connect the north and south sides of the St. Lawrence at Quebec, as is evidenced by the fact that, in addition to the six lines of converging railways which were in existence when the construction of the bridge was commenced, new connections and sources of traffic have been developed which promise to give the bridge a much larger volume of business than we had hoped for. Amongst these may be enumerated: (1) The National Transcontinental Ry. now being constructed on both sides of the St. Lawrence, which without this bridge would be unable to send its winter traffic to Maritime Province ports for shipment. (2) The Canadian Northern Ry., another transcontinental railway, now rapidly approaching completion, which is building its line to a point of connection with the north side of the bridge. (3) The Delaware and Hudson Ry., one of the most powerful of the railways of the United States, which is now seeking an entrance to the city of Quebec, and is building its line to the south side of the bridge. (4) The approaching construction of some very large industries at the great water-power at La Tuque, recently acquired by U.S. capitalists, who have contracted to furnish 4,000 carloads of pulp, paper and other freight annually for a long period of years to date from the completion of the bridge. For all these reasons the shareholders of the Quebec Bridge and Ry. Co. are more than ever convinced of the utility of the bridge and of its certainty of remunerative traffic, of its absolute necessity as a chain in the transcontinental railway system joining Eastern with Western Canada, and of its national importance as affording a crossing of the St. Lawrence at a point remote from the frontier. They rejoice at the unanimous expressions of opinion by Sir Wilfrid Laurier and R. L. Borden as to this being a national work, and they urge upon the directors of the company and upon our esteemed President, S. N. Parent, in whom the shareholders have entire and undiminished confidence, the necessity of continuing without interruption the construction of this national enterprise."

An indemnity of $3,000 was voted the President for his services during the past year.

The President asked to be relieved of the duties of President, and suggested the election of J. H. Walsh, but the sentiment of the shareholders was strongly in favor of his retaining the position. The retiring directors were re-elected. Following are the officers and directors for the current year: President, S. N. Parent; Vice-President, R. Audette; other directors (elected by shareholders), H. M. Price, H. M. Allan, Hon. N. Garneau, G. Lemoine, Hon. J. Sharples, V. Boswell; (appointed by the Government), J. B. Laliberte, P. B. Doumoulin· Secretary, A. Barthe.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-07, from July 1, 1907:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$1,024,000	$ 662,300	$ 361,900	$156,000+

Approximate earnings for Aug. $779,300, against $594,900 for Aug., 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-7, from July 1, 1907:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$7,008,274.46	$4,501,421.80	$2,506,852.66	$135,041.58+

Approximate earnings for Aug. $6,900,000, against $6,097,000 for Aug., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Approximate earnings for Aug., $348,511, against $305,092 for Aug., 1906.

MINERAL RANGE RY.—Gross earnings for July $72,338.68; net earnings $15,082.07, against $64,059.55 gross and $20,534.68 net for July, 1906. Approximate earnings for Aug. $75,273, against $77,930 for Aug. 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Approximate earnings for Aug., $994,354, against $976,799 for Aug., 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings of the G.T.R., the C. A. R., the G. T. Western Ry., and the D. G. H. & M. Ry., separately, for July, as compared with July, 1906:

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$3,069,500	$2,771,000
Expenses	2,231,150	1,965,000
Net earnings	$ 865,350	$ 806,000

CANADA ATLANTIC RAILWAY.

Earnings	$ 199,000	$ 180,000
Expenses	183,000	145,000
Net earnings	$ 16,000	$ 35,000

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 539,500	$ 480,000
Expenses	483,300	428,000
Net earnings	$ 56,200	$ 52,000

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 166,240	$ 174,000
Expenses	145,420	111,000
Net earnings	$ 20,820	$ 63,000

Approximate earnings for Aug., $4,142,579, against $3,885,271 for Aug., 1906.

The New Brunswick Government has commenced the issue of a year book for the province, the object of which is to place the extent and resources of New Brunswick before the public The statistical information is full and carefully arranged, and considerable space is devoted to the railways in the province and to the marine interests. There are 1,518 miles of railway in the province, and a considerable mileage under construction, of which the most important are the G.T. Pacific Ry., 250 miles; and the International Ry. of New Brunswick, 100 miles. Including the lines under construction there are 15 lines of railway serving the province, of which three are through lines; one connects with a U.S. system, and the others are branch lines connecting with the Intercolonial Ry.

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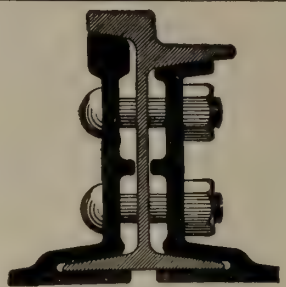
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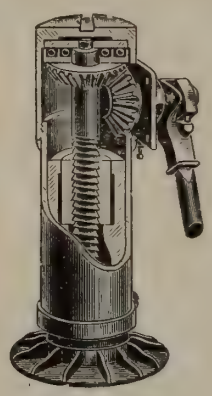
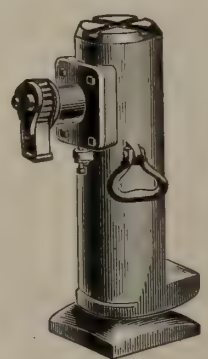

Sectional View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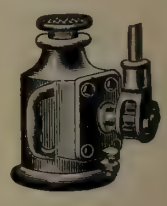
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Orders by the Railway Commissioners.

3437. Aug. 13. — Authorizing Canada Screw Co. to lay a sewer pipe under G.T.R. tracks at Hamilton, Ont.

3438–3441. Aug. 15.—Authorizing Quebec Central Ry. to reconstruct four bridges on its Tring & Megantic Branch, and Chaudiere Valley branches.

3442. Aug. 15.—Authorizing C.P.R. to construct a spur near Caledonia Springs station to the Caledonia Springs Co.'s property.

3443. Aug. 15.—Authorizing Canadian Northern Quebec Ry. to construct a bridge across the St. Foye and St. Louis roads, near Cap Rouge, Que.

3444. Aug. 15.—Authorizing Canadian Northern Quebec Ry. to construct a bridge on its Garneau-Carmen branch over the Cap Rouge River.

3445. Aug. 15.—Authorizing Bell Tel. Co. to place its wires over G.T.R. tracks near Drayton, Ont.

3446. Aug. 16. — Authorizing Quebec, Montreal and Southern Ry. to cross with its track, at rail level, the G.T.R. Three Rivers Branch, near St. Gregoire, Que.

3447. Aug. 16.—Authorizing A. Oulette, of Aston, Que., to place a telephone wire across G.T.R. tracks.

3448–3450. Aug. 16.—Authorizing Quebec, Montreal and Southern Ry. to carry its railway across highways in parishes of Becancourt and Precieux Sang, Nicolet, Que., and across Notre Dame St., Nicolet, Que.

3451–3462. Aug. 16.—Authorizing Bell Tel. Co. to place its wires over various railway tracks.

3463. Aug. 15.—Approving located line of the G.T. Pacific Ry. from east line of sec. 17, tp. 53, r. 23, west of 4th meridian, to east line of tp. 53, r. 25, west of 4th meridian.

3464. Aug. 13.—Directing that the order made on July 3, 1907, regarding wooden trestles, shall not have effect or come into operation during the present calendar year, except as regards trestle bridges of the length of 200 ft. or more.

3465. Aug. 14.—Extending the time for the coming into force of regulation made in order of July 4, 1907, prohibiting the use of lignite coal on locomotive engines until Oct. 1, 1907.

3466. Aug. 21.—Authorizing the C.P.R. to open for traffic that portion of the Lacombe Branch of the Calgary and Edmonton Ry. from Alix to Stettler, Alta.

3467. Aug. 21.—Authorizing the C.P.R. to construct a spur in Floss township, Ont., to H. Wise's premises.

3468. Aug. 21.—Authorizing the G.T.R. to construct a branch line to Titterington Bros.' premises, St. Catharines, Ont.

3469. July 31.—Approving revised location of Vancouver, Westminster & Yukon Ry. from Third Avenue to 20th St., New Westminster, B.C.

3470. Aug. 14.—Authorizing Canadian Northern Ry. to place its track across the C.P.R. Souris Branch in the s. w. ¼ of sec. 32, tp. 9, r. 20, west of the principal meridian, near Brandon, Man.

3471. Aug. 6.—Authorizing the C.P.R. to construct an extra track across Dunlevy Ave., Vancouver, B.C.

3472. Aug. 22.—Authorizing the C.P.R. to open for the carriage of traffic that part of the Stonewall Branch of its Teulon Extension from Teulon to Komarno, Man., 8.8 miles.

3473. Aug. 22.—Authorizing the G.T. Pacific Ry. to cross, for construction purposes, at grade, the Canadian Northern Ry. Regina Branch tracks, in sec. 16, tp. 36 north, r. 5, west 3rd meridian, Saskatchewan.

3474. Aug. 20.—Authorizing the G.T.R. to construct a branch line in Simcoe, Ont., for the Canadian Canners, Ltd.

3475. Aug. 20.—Authorizing the Windsor, Essex & Lake Shore Rapid Ry. to place and maintain transmission wires over the Michigan Central Rd. tracks at Talbot St., Essex, Ont.

3476. Aug. 20.—Authorizing the Central Ontario Ry. to construct a reinforced bridge over Papineau Creek, Ont.

3477. Aug. 20.—Approving location of C.P.R. from 10 miles northwest of Nomining, Que., to mileage 35.

3478. Aug. 22.—Authorizing Thessalon Lumber Co. to cross C.P.R., Sault Ste. Marie Branch, between Dayton and Dean Lake stations, Ont.

3479. Aug. 23.—Authorizing Hamilton Cataract Power, Light & Traction Co. to place electric power and telephone wires across the G.T.R., Northern and Northwestern Branch, east of Hamilton, Ont.

3480. Aug. 23.—Authorizing the Vancouver, Victoria & Eastern Ry. & Nav. Co. to carry freight over its railway between the International boundary line and Keremeos, B.C.—16.9 miles.

3481. Aug. 23.—Authorizing the Water Commissioners of Brantford, Ont., to lay a water main and house service connections under G.T.R. tracks.

3482. Aug. 23. — Authorizing City of Brantford to attach electric wires to the bottom of the superstructures carrying the G.T.R. across subways at Niagara and Albion Streets, Brantford, Ont.

3483. Aug. 29.—Approving location of Canadian Northern Quebec Ry. from the Transcontinental Ry. to the junction of the St. Foye and St. Louis roads; and that portion of the line from the junction of the St. Louis & St. Foye Roads to station 161 + 07.

3484–3491. Aug. 22.—Authorizing Bell Tel. Co. to place its wires across G.T.R. tracks at different points.

3492. Aug. 14.—Authorizing Canadian Northern Ry. to provide and operate an interlocking signal and derailing plant at the crossing by its railway of the C.P.R. line at Headingly, Man., in place of the present system.

3493. Aug. 14.—Authorizing Canadian Northern Ry. to provide and operate an interlocking and derailing plant at the crossing of its railway by the C.P.R. at Morris, Man., in place of the present system.

3494. Aug. 14.—Authorizing C.P.R. to place its track across the Qu'Appelle, Long Lake & Saskatchewan Ry. at Saskatoon, Sask.

3495, 3496. Aug. 12.—Extending to Nov. 13, 1907, the time for filing Bell Telephone Co.'s and North American Telegraph Co.'s tolls.

3497. Aug. 14.—Certifying corrections in location plans of G.T. Pacific Ry. from the north line of sec. 8, tp. 18, r. 30, west 1st meridian, to tp. 20, r. 4, west 2nd meridian, district of Assiniboia, Sask., being from mileage 14.188 to 60, already approved in order 692.

3498. Aug. 14.—Certifying corrections in location plans of G.T. Pacific Ry. from east line of tp. 17, r. 30, west 1st meridian, to north line of sec. 8, tp. 18, r. 30, west 1st meridian, district of Assiniboia, Sask., being from mileage 8.859 to 14.188, as approved in Order 1311.

3499. Aug. 7.—Authorizing Vancouver, Westminster & Yukon Ry. to construct a branch line from its main line in Vancouver, B.C., south of False Creek drawbridge, to near Clark Drive; and that the company, upon and after the construction of the last-mentioned branch, construct and operate a branch line from the last mentioned branch across the south shore of False Creek, and northerly to the intersection of the southern limit of Parker St. with the eastern limit of Boundary Ave.

3500. Aug. 7.—Authorizing the Vancouver, Westminster & Yukon Ry. to join its tracks with the C.P.R. tracks, operated by the B.C. Electric Ry., at and near the junction of Columbia and Front Sts., Vancouver, B.C.

3501. Aug. 6.—Authorizing A. E. Beck, Vancouver, B.C., to examine upon oath any witnesses who may be produced before him for examination in the application of the Brunette Saw Mill Co., to change the location plan of the Vancouver, Westminster & Yukon Ry., across certain lots in New Westminster, B.C.

3502. Aug. 15.—Authorizing the Vancouver, Westminster & Yukon Ry. to operate its southbound trains over the crossing of the B.C. Electric Ry. on Park Drive, Vancouver, B.C., by the railway of the applicant company without bringing such trains to a full stop before crossing; provided such trains shall not cross at a greater speed than six miles an hour.

3503. Aug. 2.—Authorizing the B.C. Electric Ry. to lay a second track on Park Drive, across the Vancouver, Westminster & Yukon Ry. tracks.

3504. Aug. 6.—Requiring the Vancouver, Westminster & Yukon Ry. to furnish forthwith adequate and suitable accommodation for the receiving and loading of traffic offered for carriage on its railway to any point of junction of such railway with the C.P.R.

3505. Aug. 5.—Authorizing the Vancouver, Victoria & Eastern Ry. & Nav. Co. to carry its railway along a portion of the River Road, Delta, B.C.

3506. July 19.—Authorizing the C.P.R. to construct a branch line from the Southwestern and Pembina Mountain Branch, Winnipeg, Man., southerly between lots 53 and 54, St. John parish.

3507. Aug. 15.—Approving location plans of the G.T. Pacific Ry. from west line of sec. 18, tp. 11, r. 3, west of the principal meridian, Manitoba, to and in the City of Winnipeg.

3508. Aug. 6.—Requiring the Crow's Nest Southern Ry. forthwith to furnish adequate and suitable accommodation for the receiving and loading of all through traffic offered for carriage on its railway to any point of junction of such railway with the C.P.R.

3509. Aug. 27.—Approving standard passenger tariff C.R.C. 142, cancelling tariff C.R.C. 32 of the Central Vermont, and providing a basis of 3c. per mile between stations in Canada.

3510. Aug. 27.—Authorizing the Sunderland Telephone Co. to place its wires across G.T.R. tracks at highway west of Blackwater Jct. station, Ont.

3511. Aug. 27.—Authorizing the City of Ottawa to lay a sewer under G.T.R. tracks between Concession and Turner Sts., Ottawa.

3512. Aug. 27.—Authorizing the Town of Hespeler, Ont., to lay a water main across G.T.R. tracks.

3513. Aug. 27.—Authorizing location of C.P.R. across highways in township of Glenelg, Ont., between mileage 11.76 and 10.29, and between mileage 12.84 and 13.38.

3514. Aug. 27.—Authorizing the Chatham, Wallaceburg & Lake Erie Ry. to carry its power wires, during the construction of its railway, across G.T.R. tracks at William St., Chatham, Ont.

3515. Aug. 27.—Authorizing C.P.R. to cross with its diverted railway streets in Woodbridge municipality, Ont.

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3516. Aug. 27.—Approving plans of proposed changes and grade improvements of the G.T. Ry. between St. Lambert and the line between the counties of Chambly and Vercheres, Que., mileage 6 to 20.

3517. Aug. 27.—Authorizing G.T.R. to construct a branch line in Hamilton, Ont., for the Canada Screw Co.

3518. Aug. 27.—Authorizing the Trenton Electric & Water Co. to carry its power wires under the G.T.R. bridge over Frankford Road, Trenton, Ont.

3519. Aug. 28.—Approving location of James Bay Ry. through the County of Two Mountains, Que., mileage 19.6 to 38, east from Hawkesbury, subject to the condition that room is left for the Central Ry. of Canada to build to the north of the J.B. Ry. over the portions where the existing locations conflict.

3520. Aug. 29.—Authorizing the Montreal Natural Gas and Fuel Co. to lay a gas pipe under G.T.R. tracks at Main St., Welland, Ont.

3521-3527. Aug. 29.—Authorizing Bell Telephone Co. to place its wires over various railways at certain points.

3528. Aug. 29.—Authorizing the Vancouver, Victoria & Eastern Ry. & Nav. Co. to carry passenger traffic over its railway between the boundary line and Keremeos, B.C., 16.9 miles.

3529. Aug. 29.—Authorizing the City of Stratford, Ont., to lay water pipes under G.T.R. tracks.

3530. Aug. 29.—Authorizing G.T.R. to operate an additional track across Superior St., Stayner, Ont.

3531. Aug. 29.—Authorizing C.P.R. to construct a branch line at Blairmore, B.C., to P. McLaren's premises.

3532. Aug. 30,—Authorizing Bell Telephone Co. to place its wires across C.P.R. tracks at Tillsonburg, Ont.

3533. Aug. 30.—Authorizing G.T.R. to put interlocking and derailing plant in operation at crossing of G.T.R. and C.P.R., west of Bathurst St. Jct., Toronto.

3534. Aug. 30.—Authorizing Georgian Bay & Seaboard Ry. to locate its tracks across highways in Tay township.

3535. Aug. 30.—Authorizing Guelph & Goderich Ry. to open for the carriage of traffic its line from Blyth to Goderich, Ont., 17 miles.

3536. Aug. 30.—Approving alteration in alignment of the C.P.R. Co.'s Lachine Canal South Bank Branch, near Cote St. Paul Bridge, Que.

3537, 3538. Sept. 3.—Authorizing Canadian Northern Ontario Ry. to place its wires across C.P.R. tracks in concessions 2 and 4, York township, Ont.

3539. Sept. 3.—Authorizing G.T.R. to construct a branch line to the Sawyer-Massey Co.'s premises, Hamilton, Ont.

3540. Sept. 3.—Authorizing G.T.R. to construct a branch line from Ferguson Ave., Hamilton, Ont., to the corner of Murray and Elgin Sts., with a spur from said siding where it crosses Ferguson Ave., 345 ft., to Murray St.

3541, 3542. Sept. 3.—Authorizing C.P.R. to construct two bridges over the Sawga River, Que., at the first and second crossings of the Nomining extension.

3543. Sept. 3.—Authorizing C.P.R. to construct a bridge over the Laurville River, Que.

3544. Sept. 3.—Authorizing the Canadian Northern Telegraph Co. to place its wires over C.P.R. Souris Branch tracks, at the crossing of the latter and the C. N. Ry. Brandon-Regina Branch, in the s. w. part of sec. 32, tp. 9, r. 20, west of the principal meridian, Man.

3545. Sept. 3.—Authorizing C.P.R. to construct a branch line to Parker & Thorpe's premises, near Wardner, B.C.

3546. Sept. 3.—Approving location of Hamilton, Waterloo & Guelph Ry. Co.'s line from northerly boundary of Dundurn Park, Hamilton, to Galt, Ont., mileage 1.25 to 25.60.

Ry. Commissioners' Operating Orders.

3464. Aug. 11—In pursuance of the powers conferred upon it by secs. 30 and 269 of the Railway Act, and of all other powers possessed by the Board in that behalf; the Board orders that the regulations made on July 3, 1907, requiring every railway company subject to the legislative authority of the Parliament of Canada, operating by steam power any railway or railways, any part or parts of which is or are constructed of or upon wooden trestles, during the months of May, June, July, Aug. and Sept. in each year, to place and keep upon every portion of its railway or railways, where such trestles exist, watchmen for the purpose of protecting such trestles from fire, shall not have effect or operation during the present calendar year, except as regards trestle bridges of the length of 200 ft. or more.

USE OF LIGNITE COAL.

3646. Aug. 14—In pursuance of the powers conferred upon it by secs. 30 and 269 of the Railway Act, and of all other powers possessed by the Board in that behalf; the Board orders that the time fixed for the coming into force of the regulation made by the Board on July 4, 1907, prohibiting every railway company subject to the legislative authority of the Parliament of Canada for burning lignite coal on its locomotive engines as fuel for transportation purposes be extended to Oct. 1, 1907, and that until the said last mentioned date, the said regulation be not operative.

G.T.R. Directors' Inspection.—For the first time for several years past, Sir C. Rivers Wilson, President G.T.R., has not made a trip to Canada. A. W. Smithers, Vice-President, arrived in Montreal from England, Sept. 3, having travelled over the Central Vermont Ry. from New London, Conn., in company with C. M. Hays, Second Vice-President and General Manager. Accompanied by Mr. Hays and a number of officials of the company, Mr. Smithers made a trip of inspection over the G.T.R., and subsequently went to Vancouver, B.C., visiting a number of points on the route of the G.T. Pacific Ry.

Freight Car Balance and Performance.—The Car Efficiency Committee of the American Railway Association has issued statistical Bulletin 2, comprising a statement of freight car balance and performance for the six months ended Dec. 31, 1906. The different railways are grouped in districts and the tables given include the Canadian lines under one head, the information given being as follows: Revenue freight cars owned, 43,415; average number system cars on line, 25,201; average freight railroad cars on line, 14,673; total railway cars on line, 39,874; per cent. railway cars on line of total owned—home, 58; foreign, 34; all railway, 92; private cars on line, 2,780; total all cars on line, 42,654; per cent. of cars in shops, 5.43; number of freight locomotives owned, 722; average cars on line per freight locomotive owned, 59; total freight car mileage, 216,749,558; average miles per car per day, 27.9; per cent. loaded mileage, 76.0; total mileage revenue freight, 2,591,512,370; average ton miles—per car mile, 11.9; per loaded car mile, 15.6; per car per day, 330; gross freight earnings, $17,467,160; average daily earnings—per car owned, $2.19; per railroad car on line, $2.38; all cars on line, $2.22.

Railway Finance, Meetings, etc.

Beersville Coal and Ry. Co.—See North Shore Ry. Co.

Bessemer and Barry's Bay Ry.—Following are the officers and directors for the current year: President and General Manager, H. C. Farnum, Bessemer, Ont.; Vice-President, G. E. Hoyt, Bancroft, Ont.; Secretary-Treasurer, H. L. Bingham, Bessemer; other directors: J. C. Dale, W. Cross, Madoc, Ont.

Buffalo and Lake Huron Ry.—The accounts for the half-year ended June 30 show an available balance, after providing for the interest on first and second mortgage bonds, of £14,536, out of which the directors propose to pay the usual dividend of 5s. 3d. per share, leaving £751 to be carried forward.

Canada Coal and Rd. Co.—The annual meeting of shareholders held at Montreal, Sept. 3, was purely formal. The company's property, franchises, etc., have been sold to the Maritime Coal, Ry. and Power Co.

Canadian Pacific Ry.—A London, Eng., cable Sept. 3, stated that within the previous ten days the C.P.R. sold £1,250,000 4% debenture stock at 102.

Caraquet Ry.—The annual meeting of shareholders was held at Bathurst, N.B., Aug. 27, when the directors reported as to the operations of the past financial year. The report is not made public. Following are the directors for the current year: R. H. Bowes, W. D. Northgrave, A. G. Ross, E. B. Stockade, J. H. Whitehead, J. J. Warren and J. Webster.

Columbia and Western Ry.—The suit which the C.P.R. brought against A. Heinze, Butte, Mont., in connection with the land grant given by the B.C. Government for the construction of the C. and W. Ry., has been decided in favor of the C.P.R. The Legislature voted 600,000 acres of land to the railway, and there was an agreement as to the partition of the land when the C.P.R. purchased the railway. Heinze claims that the partition was not to take place until 1912, but the C.P.R. wants an immediate partition. Heinze has been directed by the B.C. courts to select the area to which he is entitled under the agreement with the C.P.R. An appeal has been entered against the decision.

Cumberland Ry. and Coal Co.—A special general meeting of shareholders was held in Montreal, Sept. 26, to authorize the directors to issue bonds aggregating $1,500,000 for such period, rate of interest and terms as might be deemed advisable, and to secure the same in such manner as may be determined upon, and to provide for the redemption or retirement of the company's outstanding bonds.

Dominion Atlantic Ry.—Gross earnings for July $159,800, against $146,544 for July, 1906. Gross earnings for seven months ended July 31, $616,900; against $576,237 for same period 1906.

Grand Trunk Ry.—London, Eng., papers continue to criticize the G.T.R. directors upon the recommendations in the half-yearly report to be presented at the meeting on Oct. 2. One paper refers to the "extreme conservatism of the board, which seems determined to pour cold water on the legitimate hopes of the junior stockholders," and adds that the "extraordinary proposal of the directors to provide $200,000 for a nucleus of a pension fund will assuredly be vigorously opposed at the forthcoming meeting."

Great Northern Ry. of Canada.—The matter of the Great Northern Construction Co., in liquidation, and Hyde, liquidator, and Scott, tiers opposant, and Hyde contestant, came before the courts at Quebec, for proof and final hearing, Aug. 30. The G.N.C.

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Air-Brake Instructor	Architect
Air-Brake Inspector	Bookkeeper
Air-Brake Repairman	Stenographer
Mechanical Engineer	Ad Writer
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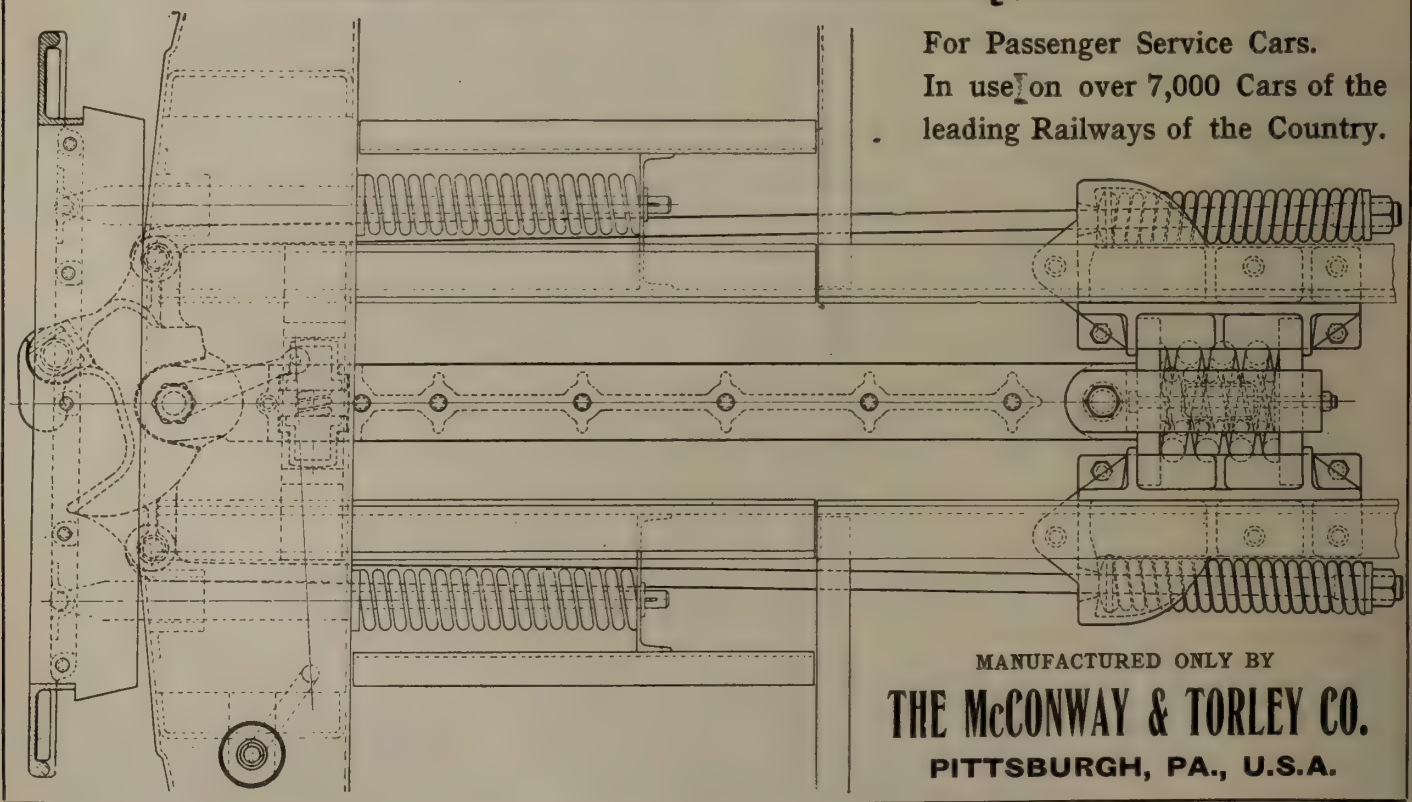

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Co. was a U.S. corporation formed for the purpose of constructing the Great Northern Ry. of Canada, and its affairs have been before the courts for several years.

Great Northern Ry., U.S.—At the annual meeting of shareholders to be held at New York Oct. 10, there will be presented for consideration and action a proposition that the Great Northern Ry. acquire, subject to the existing liens thereon, any or all of the properties of its subsidiary companies. Accompanying the circular is the following statement to stockholders issued by J. J. Hill, chairman of the Board of Directors: "The Great Northern Railway Co. now controls the various companies constituting its railway system through ownership of their stocks. The proposition to be submitted for your action at the annual meeting for the purchase of the railways and properties of these subsidiary companies as outlined in the formal notice of meeting sent to you herewith is to substitute for the present form of ownership through stocks a direct ownership of the railways and properties of the Great Northern Ry. Co. Your directors consider this change desirable, as it will consolidate ownership of the property and simplify the management of the system, and they recommend the proposition for your favorable action."

There are 17 of the subsidiary companies. The G.N. Ry. owns the entire capital stock of 16 of them, and all except about $360,000 of the $20,000,000 capital stock of the seventeenth, the St. Paul, Minneapolis and Manitoba Ry.

Intercolonial Ry.—A statement issued at Ottawa Aug. 29, is to the effect that for the year ended June 30 the I.C.R. showed a surplus of $400,000 compared with $62,000 in 1905-06. For the nine months ended Mar. 31, the surplus was $219,000. In 1904-05 there was a deficit of $1,725,000, and in 1903-04 a deficit of $900,000. From present indications, the despatch says, the current year will be far and away the most successful in the history of the road.

Hon. G. P. Graham, who has been appointed Minister of Railway and Canals, in an interview expressed the view that a Government railway should give good service to the people; it should pay its way, and if possible some interest on the investment; beyond this it should reduce fares, thereby helping to bring about a reduction of fares on other lines.

Joliette and Brandon Ry.—There has been deposited with the Secretary of State at Ottawa a mortgage deed of trust between the J. and B. Ry. Co., the Royal Trust Co., and the C.P.R., securing the mortgage bonds of the J. and B. Ry. to the extent of $125,000.

Massawippi Valley Ry.—At the annual meeting of shareholders at Rock Island, Que., Sept. 4, the usual report of the operation of the line was submitted and approved. The railway is operated under lease by the Boston and Maine Rd., and no separate report is issued. A resolution referring to the death since the last annual meeting of Hon. C. C. Colby, a director, was passed. Following are the officers and directors for the current year: President, J. G. Foster, Derby Line, Vt.; Vice-President, C. W Cote, Sherbrooke, Que.; Treasurer, J. H. Williams, Bellows Falls, Vt.; other directors: C. D. White, F. Grundy, F. N. McCrea, Sherbrooke, Que.; J. W. Dunklee, Boston, Mass.; C. W. Kathan, Rock Island, Que.; H. N. Turner, St. Johnsbury, Vt.; Secretary, S. Stevens, Rock Island, Que.

North Shore Ry. Co.—Application is being made to the New Brunswick Government for the incorporation of a company with this title under the provisions of the Joint Stock Companies' Act, for the purpose of taking over and operating the Beersville Coal and Ry. Co., with a capital of $190,000 and offices at Beersville, N.B. The provisional directors are: J. M. Seeley, W. G. Kennedy, H. Von Hagen, New York City; I. Purdy, Purdy's Station, N.Y.; M. F. Keith, Moncton, N.B. The petition sets forth that J. M. Seeley and others obtained a writ of fieri facias in the Supreme Court under which the lands, tenements, buildings, and franchises of the Beersville Coal and Ry. Co. were sold at Sheriff's Auction, at Beersville, Aug. 6, to J. M. Seeley, who has received a deed thereof from the sheriff. The property transferred consists of the railway from near Adamsville station on the Intercolonial Ry., to Beersville, with an extension to Coal Branch, altogether 8.63 miles, with all the property used in connection with the operation of the same; the power to extend the line to Brown's Landing, and to construct branch lines. The North Shore Ry. Co. desires power to operate the line, to engage in coal mining and other allied businesses, and to issue bonds or debentures to the extent of $8,000 a mile of railway.

Pere Marquette Rd.—The reorganization of the P.M. Rd., and the amalgamation of the P.M. Rd. Co. and the P.M. Rd. Co. of Indiana, will be formally accomplished at special meetings of shareholders to be held Oct. 26.

The new Pere Marquette Rd. $5,000,000 6% notes have been oversubscribed, says a Boston, Mass., despatch. This was accomplished by the combination of preferred and common stock subscriptions. A total of slightly more than 94,000 shares out of 102,000 shares outstanding have assented to the reorganization plan. In addition, 16,181 shares of common stock availed themselves of the right to subscribe to the extent of 20% of their holdings in the notes. The subscription works out about as follows: 94,000 shares preferred take 50% their par in new notes, say $4,700,000; 16,181 shares common take 20% their par in new notes, say $323,600; additional subscriptions to even up fractions, $4,760; total, $5,028,360. The notice calling the meeting says that the business is: To ratify, approve and confirm an agreement dated Aug. 12, 1907, between the Pere Marquette Rd. Co., the Cincinnati, Hamilton and Dayton Ry. Co., and N. Thayer and others, committee, providing for the settlement by arbitration of all claims between the two corporations and for the cancellation of the indenture of lease from the P.M. Rd. to the C.H. & D. Ry., dated March 1, 1905, upon such terms as the arbitrators (W. W. Crapo and J. Harmon) may determine.

Quebec Southern Ry.—South Shore Ry.—Judgment has been rendered in the Exchequer Court, by Justice Burbidge, in the action of the claims against the Q.S.R. Co. and the South Shore Ry. Co. The Registrar of the Court had prepared a report on the subject and recommended that the purchase price of the two roads which now form the Quebec, Montreal and Southern Ry. be divided for the payment of claims to the Bank of St. Hyacinthe, $121,019, and for privileged claims of clerks and other incidental expenses, $15,972 out of the proceeds coming to the Quebec Southern; while for the South Shore portion the registrar recommended the payment of $715 to L. G. J. Fosbrook; $1,763.77 to W. H. Eglaugh; $28,229.80 to the estate of Hon. R. Prefontaine, and $250 to Christina Rowse. Hon. F. L. Beique, who appeared for the Hochelaga Bank, asked that the report be continued until Oct., but this was opposed by other counsel, especially by J. L. Perron, K.C., on behalf of the Prefontaine estate. After argument on various objections to the report, Justice Burbidge rendered judgment as follows: Payment of the Bank of St. Hyacinthe's claim is refused, and immediate payment of the following claims is allowed: Working expenditures and the vendor's lien of L. G. J. Fosbrook, W. M. Eglaugh, estate Hon. R. Prefontaine and Christina Rowse. The Court further ruled that anyone interested could, within 30 days, apply to have the report varied for some specific reason, under reserve of the rights of Messrs. Hodge and White, former President and Secretary of the Quebec Southern Ry. Company.

Temiskaming and Northern Ontario Ry.—The commission leased certain of its lands to various mining companies upon agreements under which the companies pay from 15 to 50% of the value of the ore according to the result of the assay. During the current year the commission has paid over to the Ontario Government $3,189 on account of royalties from the Cobalt Townsite Mining Co., and $30,309 from the Right-of Way Mining Co.

The Provincial Treasurer has filed an affidavit asking for further particulars in the action which Coates, Son & Co., London, Eng., has instituted against the Ontario Government. The plaintiffs acted as agents for the Ontario Government in the sale of treasury bills to provide funds for the construction of the T. and N.O. Ry., and claim that they should have had the disposal of the permanent securities issued. The claim is for $14,600, being ¼ of 1% commission on securities issued.

Toronto, Hamilton and Buffalo Ry.—Estimated earnings for Aug., $78,026.08, against $62,062.84 (actual) for Aug., 1906.

Vancouver, Victoria and Eastern Ry.—Vancouver, Westminster and Yukon Ry.—Press reports state that negotiations are in progress for the sale of the property and charter rights of the latter to the first-named company. The V., V. and E. Ry. is operated as part of the Spokane Falls and Northern Ry., a Great Northern Ry., U.S., subsidiary; and so much of the V., W. and Y. Ry. as has been constructed is operated in connection with the Victoria Terminal Ry. and Ferry Co., and the New Westminster Southern Ry., in order to give the Great Northern Ry., U.S., an entrance into Vancouver, B.C. Other press reports credit the G.T. Pacific Ry. with being the company which is desirous of purchasing the V., W. and Y. Ry. charter.

Canadian Ticket Agents' Association.

There has been practically no change in the arrangements for the Canadian Ticket Agents' Association trip to Winnipeg as announced in our Aug. issue. The members and their guests will leave Toronto on Thursday, Oct. 10, at about 10 p.m., by special C.P.R. train, which will be run over the G.T.R. to North Bay about an hour ahead of the regular Pacific express. Members from the Montreal district will be conveyed to North Bay on a special sleeping car attached to the Pacific express from Montreal, and at North Bay this car will be transferred to the Association's special train, which will then run to Port Arthur about an hour behind the Pacific express. Saturday, Oct. 12, will be spent at Port Arthur and Fort William, and Winnipeg will be reached on Sunday morning, Oct. 13. The annual meeting will be held at the Royal Alexandra Hotel, Winnipeg, on the morning of Monday, Oct. 14, and a dinner will be held at the same place in the evening. For the return trip the special train will leave Winnipeg Wednesday, Oct. 16, about 4 p.m., reaching Toronto on Friday, Oct. 18. No doubt many of the members will return via St. Paul and Chicago. Arrangements are being made for the entertaining of the party at Port Arthur, Fort William and Winnipeg. Two C.P.R. dining cars, which have been specially chartered by the Association, will be attached to the special train.

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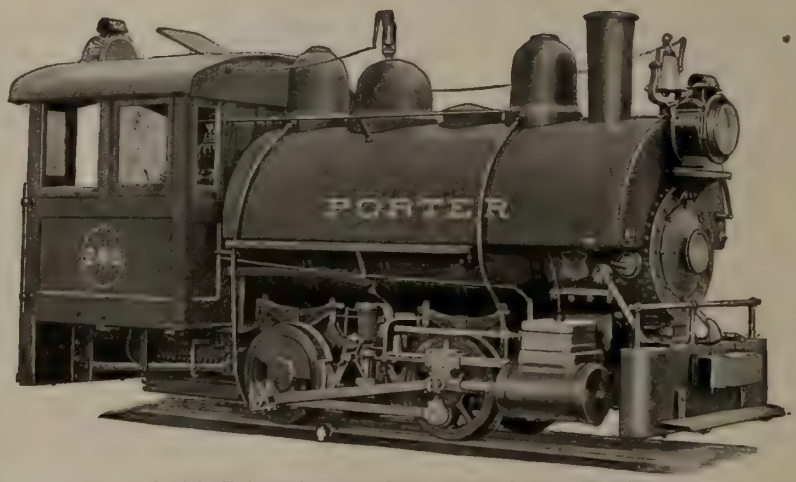

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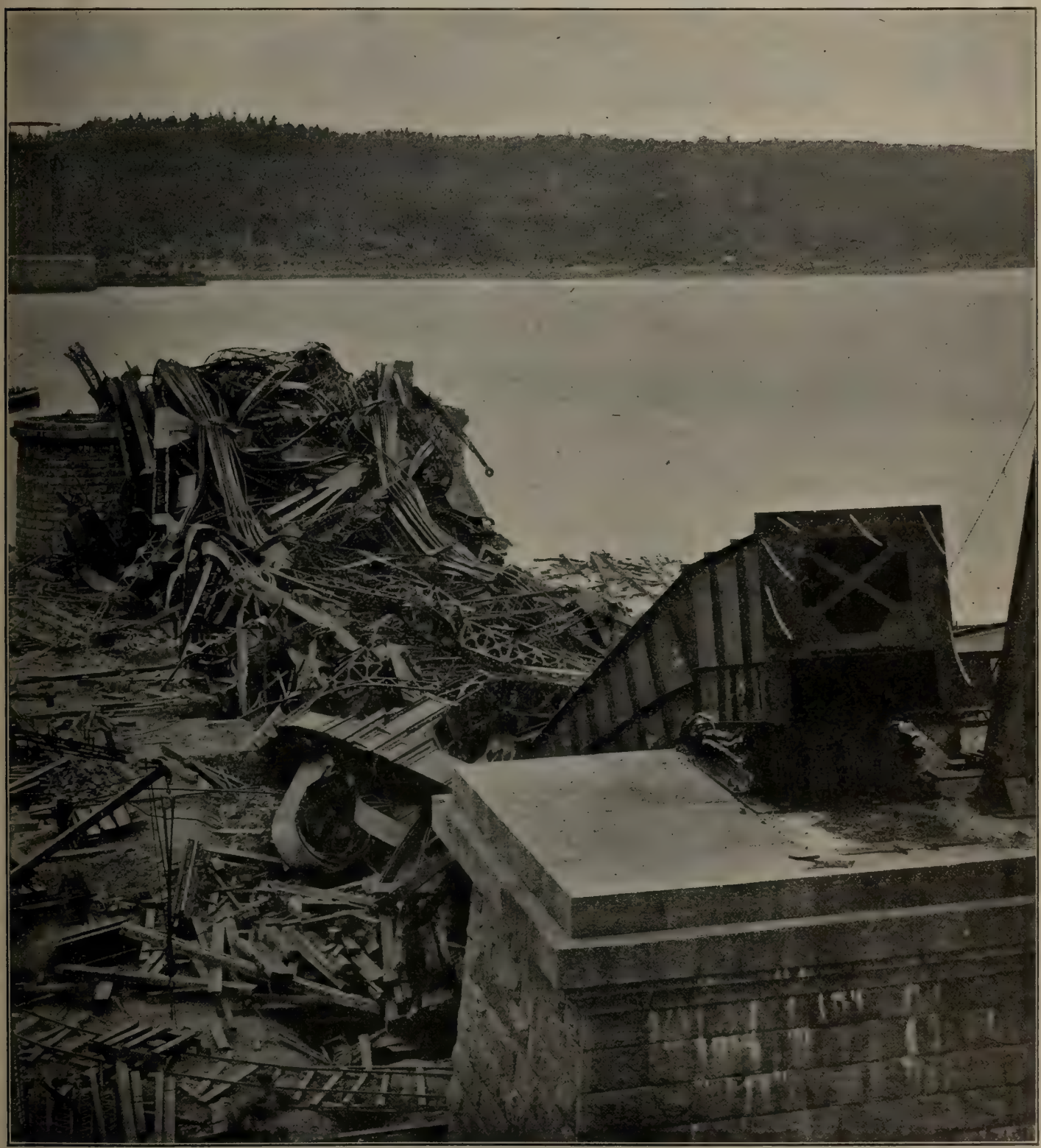
The Quebec Bridge Collapse.

The unfortunate collapse of the southern extension arm and approach span of this bridge, which occurred Aug. 29, occasioning the death of 65 men, will delay for a considerable time the completion of a work which was commenced over seven years ago, and which would have had the longest single span of any bridge in the world. The Dominion Government has appointed a commission, consisting of H. Holgate, C.E., Montreal, Chairman; Prof. J. G. G. Kerry, of McGill University, Montreal; and Prof. J. Galbraith, of Toronto University, and Principal of the School of Practical Science, Toronto, to enquire into the causes of the disaster, and report thereon. The first sitting of the commission took place at Quebec Sept. 10. The Quebec Bridge and Railway Co., the Phœnix Bridge Co., Phœnixville, Pa., the contractors for the construction of the bridge, and the International Bridge and Structural Ironworkers' Union, on behalf of employes, were legally represented.

The collapse of the structure does not interfere with the navigation of the river, as there is a great depth of water at that point, and most vessels keep close to the north shore, the wreckage being all on the south side.

At the general meeting of the Quebec Bridge and Railway Co., Sept. 3, a report of which appears in another column, references were made to the disaster, but in view of the Government enquiry, it was not considered advisable to make any lengthened statement. The Quebec Bridge Co. was originally formed in 1887, for the purpose of building a bridge across the St. Lawrence about 6½ miles above the city of Quebec.



THE QUEBEC BRIDGE DISASTER. VIEW LOOKING NORTH FROM THE SOUTH BANK OF THE RIVER.

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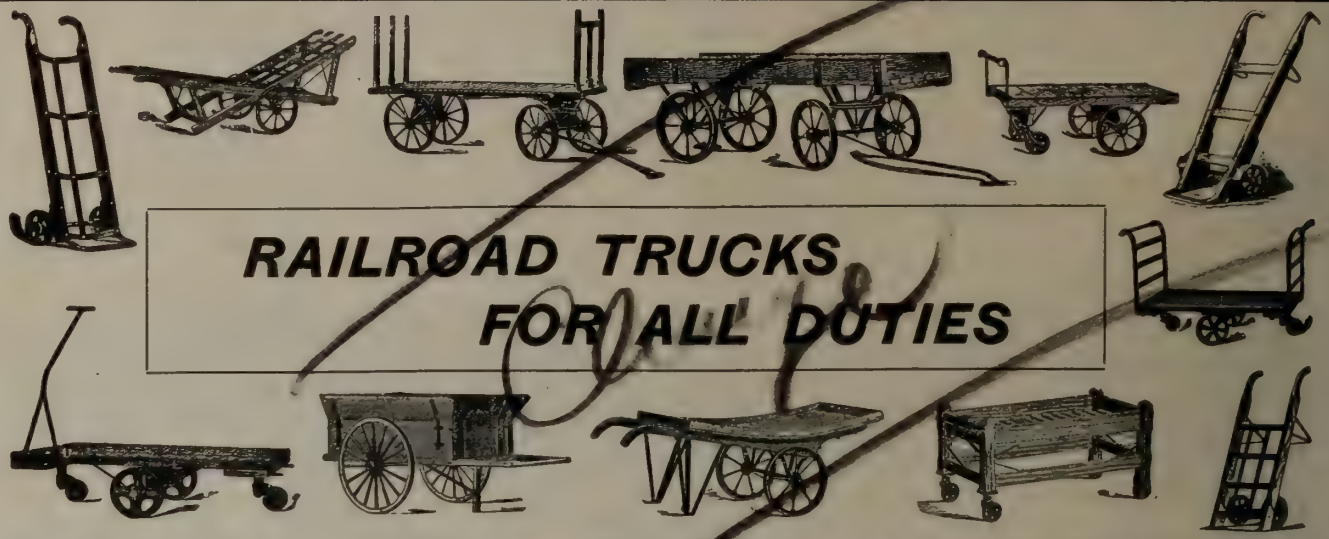

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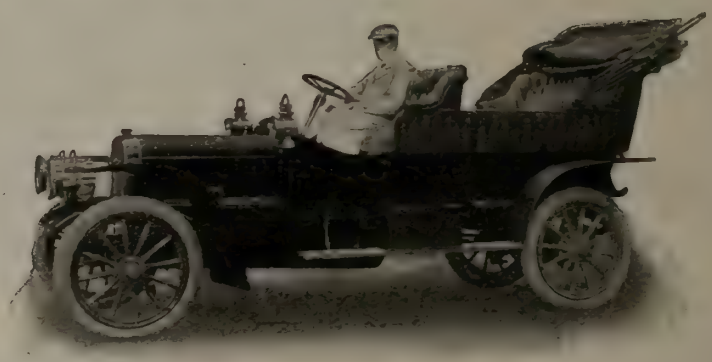

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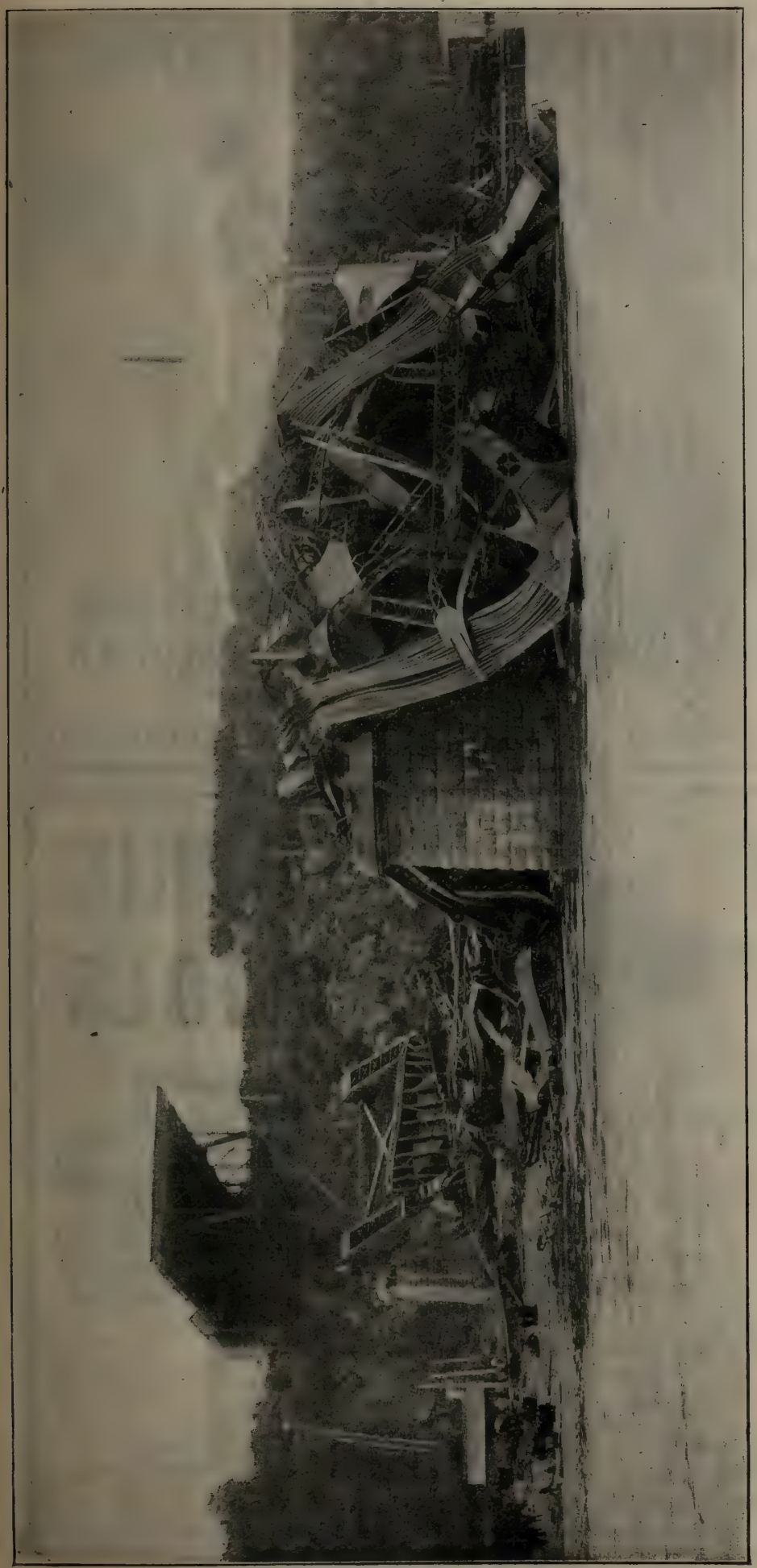

THE QUEBEC BRIDGE DISASTER. VIEW LOOKING TOWARDS THE SOUTH BANK OF THE RIVER.

Certain powers, which were then conferred upon the company were revived, and confirmed by Parliament in 1897. Among the promoters was the Hon. S. N. Parent, then Mayor of Quebec, who was also Premier of the Province, and he became President of the Bridge Company. In 1899 the company obtained from the Dominion Government a subsidy of $1,000,000. In 1901, the Quebec Terminal & Railway Co. was formed, the directors being Hon. S. N. Parent, Hon. J. Sharples, T. Taschereau, G. Lemoine, and D'Arcy Scott, the present Mayor of Ottawa. In Aug., 1899, Sir Wilfrid Laurier, in the House of Commons, estimated that the cost of the bridge would be $4,000,000. This figure was given as a result of the investigations made by Theodore Cooper, of New York, consulting engineer of the Bridge Company. In 1903, a statement was made in Parliament that the cost would be $6,866,882. During the last session of Parliament, the Hon. W. S. Fielding stated that the estimated cost would be somewhere between $7,500,000 and $8,000,000. In 1903 the company admitted having a subscription list of $2,000,000, and an authorized capital of $3,000,000. The Province of Quebec voted a subsidy of $250,000, and the city of Quebec $300,000. Bonds were also negotiated to the extent of $472,000, forming a terminal company in which the railways which used the bridge would be interested. Mr. Fielding explained that if that company was formed, the Government would either take over the bridge and lease it to the terminal companies or transfer it to them in some other way. The terminal company would have the management and operation of the bridge, and, pending the accomplishment of that end, the Government would assist the Bridge Company by becoming its banker, and lending it money instead of guaranteeing its bonds.

At the point on the river where the bridge is being erected, the waterway is about 1,900 ft. wide at low tide, and about 2,500 ft. at extreme high tide, the rise varying from a minimum of 14 ft. to a maximum of 20 ft. The maximum depth of water is about 180 ft., decreasing towards the main river piers, where at low tide it is 10 ft., and at high tide 30 ft. deep. These piers are 1,800 ft. apart between centers. The original plans provided for the channel to be crossed by a suspended span and two cantilever arms, thus making an unsupported structure 1,800 ft. long between centers of main piers. The length of anchor arms on each side of the main span was to be 500 ft., with an approach span of 220 ft., at each end between anchor piers and terminal abutments. The total length of the structure would be, including abutments, 3,300 ft. A headway clearance of 150 ft., between underside of lower chords and highest tides for vessels in the channel, was to be provided. There would be a clear width of 62½ ft. between trusses for two steam railway tracks in the center, divided by screens from a single electric track and highway on each side. The coping of the main piers is 30 ft. above high tide, and the highest point of superstructure above coping would be about 330 ft. The substructure consists of two main piers, two anchor piers and two abutments. The anchor piers are placed at the foot of the cliffs beyond the limits of high water. The north anchor pier is founded on solid rock, and the south one on a formation of hard blue clay about 86 ft. thick, containing large boulders. Both piers are of granite backed with concrete, 105 ft. long by 24 ft. wide at coping, and about 111 ft. by 30 ft. at the base, and 56 ft. high from bottom of anchorage to the coping, or base of steel towers. The north abutment is

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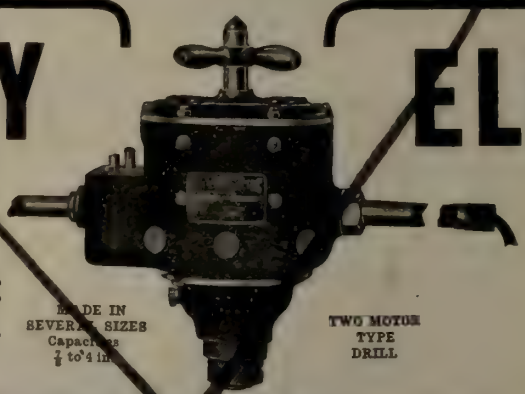

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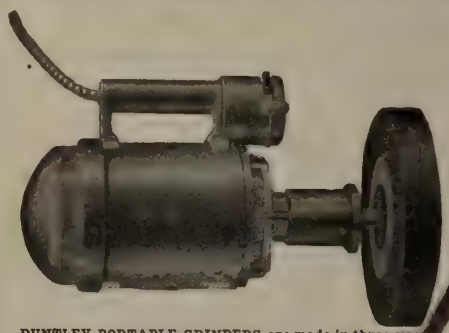

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THE QUEBEC BRIDGE AS PROJECTED. THE WHITE LINES INDICATE THE 1,300 FEET AT THE SOUTH END WHICH COLLAPSED.

built into the face of the cliff, and the south one is built on a similar formation. Both are massive U shaped structures built of granite backed with concrete, having the same lateral dimensions, 80 ft. wide by 40 ft. deep, the maximum height of front wall for both abutments being about 40 ft. The main pier on the north side is built of concrete, faced with granite masonry, with the exception of the upper part of the pier for a depth of 19 ft. below the coping, which is laid with solid granite blocks throughout. The total height of pier from top of caisson to coping is 57½ ft.; at the latter point its length is 133 ft., and width 30 ft. The caisson was sunk through a compact mass of granite boulders bound together with cobble stones and fine gravel. The progress of penetration of the caisson averaged 4 inches in 24 hours, but at times was too small to be recorded. The substructure was practically completed in 1902, and the work on the superstructure commenced the following year. It was expected that the work would have been completed in 1908, but the collapse will doubtless occasion a delay of two or even three years.

G.T.R. Betterments, Construction, Etc.

Branch at St. Lambert.—Application is being made to the Railway Commission for approval of the location plans of a branch line at St. Lambert, Que. The proposed line will leave the present line about 1,700 ft. south of St. Lambert, and run northerly and westerly through the town, crossing Hickson, Edison and First avenues to a point on the company's line near the entrance to the Victoria Jubilee bridge. It is stated that the new branch is designed to give direct connection with the Victoria Bridge for the line from Rouse's Point and St. John's, Que.

Montreal Level Crossings.—The level crossings committee of the Montreal City Council is considering a proposal to depress the G.T.R. tracks in the city 15 ft., and carry the streets over them by means of bridges. One of the main difficulties that has prevented a conclusion being reached on the question has been the fact that if the tracks were elevated certain streets must of necessity be closed. The committee is having rough plans and an estimate of the cost prepared so that full consideration may be given to the project. W. Wainwright, Fourth Vice-President, stated, Sept. 11, that the proposal had not been submitted to the company, and consequently there was nothing to be said about it.

Ottawa Station and Hotel.—The Dominion Cabinet has approved of the plans for the Ottawa central station and hotel. The station will be on practically the same site as the present central station which was taken over by the G.T.R. from the Canada Atlantic Ry. The hotel will be located on the south-west corner of Major's Hill Park, with a frontage of 135 ft. on Wellington St. and a side elevation on the west, facing the canal and eastern block of 80 ft. It will be 7 stories high, with 300 rooms and 100 bathrooms. The architecture will be Norman gothic, to harmonize with the Parliament and Departmental buildings. Is is said that construction will be started this autumn. B. G. Gilbert, of New York, is the architect, and associated with him is C. P. Meredith, of Ottawa.

Pembroke Southern Ry.—Plans for the extension of this line—leased to the Canada Atlantic Ry. (Ottawa Division G.T.R.)—from Pembroke to Golden Lake, Ont., 21 miles, have been approved by the Ontario Railway and Municipal Board. The company has decided to erect a new station at Pembroke.

Rice Lake Bridge.—A proposal is under consideration at Harwood, Ont., to rebuild the bridge across Rice Lake, on the old railway between Cobourg and Peterborough, Ont. The re-opening of the iron mines at Blairton and other mining activity adjacent to Peterborough is the ground upon which the proposal has been made.

Grade Raising at Listowel.—The company is raising the level of its Stratford-Owen Sound line at Listowel, Ont. The level of the bridge over the Maitland River is being raised 4 ft. Heavier steel is also being laid, and the general character of the branch improved.

London Improvements.—C. M. Hays, Second Vice-President and General Manager, accompanied by a number of the company's officials, was in London, Ont., Sept. 6. He said nothing definite had been decided in regard to the proposed track elevation in the city. The elevation of the tracks was bound to come, and he thought that a move would be made in that direction very shortly.

A contract has been let to J. Hayman, London, for the erection of an addition to the company's car shops in that city. The work will be gone on with at once.

The site of the new station in the city will be just opposite the present one, on lands which the company purchased some time ago.

Among the cases set down for hearing at the term of the Supreme Court, opening at Ottawa, Oct. 1, is the appeal of the G.T.R. against the order of the Railway Commissioners directing the company to run one train daily between Montreal and Toronto, with third-class accommodation at two cents a mile. T. K. Meredith, K.C., has been appointed to represent the Province of Ontario.

The G.T.R. has issued a circular declining to haul cars containing stored acetylene gas, or cars with their own acetylene generating plant charged. Official cars equipped with acetylene gas for illuminating purposes will not be declined providing the storage tanks and generating plants or cartridges are emptied. The C.P.R. is reported to have determined to discontinue the use of acetylene gas in its cars.

Railway Rolling Stock Notes.

The I.C.R. during Sept. received twelve 15-ton hopper cars from Rhodes, Curry & Co., Ltd., Amherst, N.S.

The Crossen Car Manufacturing Co., Cobourg, Ont., is making delivery of stock cars to the Canadian Northern Ry.

The Temiskaming and Northern Ontario Ry. Commission is considering tenders for two vans and two baggage-mail cars.

The Canada Car Co., Montreal, is building 15 Hart convertible ballast cars for the Dominion Dump Car Co., and one erecting car for the Hamilton Bridge Co.

The G.T. Pacific Ry. has ordered 2,400 box cars for 1908 delivery, from the Canada Car Co., Montreal. They are to be of the same standard type as those previously built for the line.

The G.T.R. recently despatched from Depot Harbor, Ont., by steamboat to Fort William, Ont., 200 flat cars and a complete outfit of construction cars, unloading plows, etc., for the G. T. Pacific Ry.

The Winnipeg Board of Control has purchased from Mussens Ltd., Montreal, subject to inspection, a 38-ton standard gauge locomotive, for $3,600. It has also bought 6 flat cars, 50,000 lbs. capacity, in the U.S.

In the description of the I.C.R. motor car in our Sept. issue, pg. 669, the following particulars were given:

Weight of motor (without car) . . . . . 51,000 lbs.
Weight of motor (with car) . . . . . 92,000 lbs.
Total weight of motor and car loaded about 142,000 lbs.

One of our subscribers, a prominent motive power official, having asked if some mistake had not been made in these particulars, we communicated with the I.C.R. Superintendent of Motive Power, G. R. Joughins, who advises us that the weights as given in the specification are correct, but that perhaps the manner in which they are put down is not quite clear. The "weight of motor without car, 51,000 lbs.," is correct. The "weight of motor with car, 92,000 lbs.," should read "at motor end." The other end of the motor car weighs 50,000 lbs., making a total of 142,000 lbs.

The Canadian Northern Ry. ordered 200 Hart convertible ballast cars, 34 ft. long, 80,000 lbs. capacity, from the Dominion Dump Car Co., Montreal, for delivery during Mar. and April, 1908. They are to be built by the Canada Car Co., Montreal.

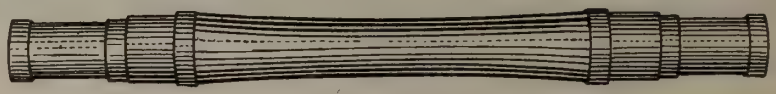
The G.T. Pacific Ry. has ordered 200 Hart convertible ballast cars from the Dominion Dump Car Co., Montreal, for delivery in 1908. The dimensions and character of these cars are similar to those previously built for the line. They are to be built by the Canada Car Co., Montreal.

The Locomotive and Machine Co., of Montreal, delivered during July, eight consolidation locomotives to the C.P.R., and two 10-wheel locomotives to the Delaware and Hudson Rd. It is building a steam shovel for

THE HAMILTON STEEL & IRON CO.

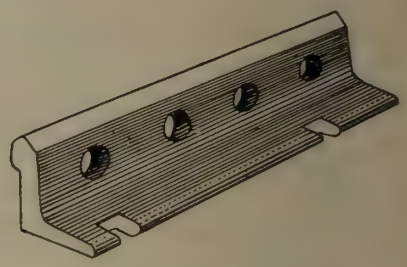
LIMITED

HAMILTON, CANADA.



AXLES

CAR AND LOCOMOTIVE



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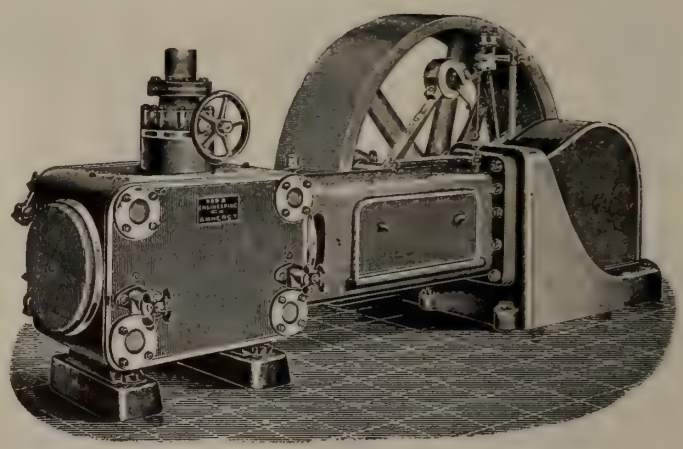

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immediate delivery and a snowplow for Dec. delivery for the C.P.R.

The C.P.R. has ordered the following rolling stock: 10 passenger locomotives, Pacific type, 67 box cars, 1 refrigerator, 2 stock cars, 30 flat cars, 5 steel coal cars, at its Angus, Montreal, shops; 3 vans at its Farnham, Que., shops; 1 rotary snowplow at the Locomotive and Machine Co., Montreal; and 2 60-ton wrecking cranes in the U.S.

The Imperial Rolling Stock Co., for the Canadian Northern Ry., is placing through the Dominion Securities Co., Toronto, and W. A. Reid & Co., New York City, an issue of $1,500,000 series O, equipment trust 4½% notes. The notes mature in 10 equal annual instalments beginning June 1, 1908, and are secured on 750 box cars, 170 dump cars, 140 flat cars, 25 cabooses, four snowplows, 21 ten-wheel locomotives, and 29 passenger cars.

The G.T. Pacific Ry. has ordered from the Canada Foundry Co., Toronto, 20 locomotives, to the following specifications: Weight on drivers, 125,000 lbs.; weight on leading truck, 44,000 lbs.; driving wheels, 69 ins.; cylinders, 18 and 24 ins.; truck wheels, 34 ins.; water capacity, 6,000 imp. gals.; coal capacity, 12 tons. They are of the eight-wheel express type, with two pairs of coupled drivers and four-wheel leading truck.

The Toronto, Hamilton and Buffalo Ry. is having 140 box cars built by the Canada Car Co., Montreal, which are to be of the standard specification for 60,000 lbs. capacity, the special fittings including: Diamond arch bar trucks, wheel base, 5 ft. 2 in., Westinghouse air brakes, Simplex body and truck bolsters, Simplex brake beams, McCord journal boxes, Canadian Bronze Co.'s journal bearings, cast iron wheels, 33 ins.

The specifications for the 32 ore cars, 100,000 lbs. capacity, 61 box cars, 49 flat cars, five stock cars, refrigerator car, ballast car, two vans, 25 colonist cars, 20 first-class cars without smoking rooms, and 10 first-class cars with smoking rooms, recently ordered at the company's Angus, Montreal, shops, are similar to those described in our Sept. issue. The 10 sleeping cars are similar to those described in our May issue; the 40-ton coal cars are 36 ft. 8 in. by 8 ft. 10 in. over frame, have side doors and standard equipment similar to freight cars already described.

The C.P.R., between Aug. 14 and Sept. 17, received the following additions to rolling stock: 740 box cars, 26 steel coal cars, 20 coal cars of 40 tons capacity, 12 suburban cars, 7 first-class cars, 3 tourist cars, 3 passenger locomotives, 5 switching locomotives and 2 pile drivers, from its Angus, Montreal, shops; 8 vans from its Farnham, Que., shops; 11 steel ore cars from the Dominion Car and Foundry Co., Montreal; 16 freight locomotives and 1 steam shovel from the Locomotive and Machine Co., Montreal, and 2 sleeping cars, 2 first-class and smoking cars, and 2 tourist cars from the U.S.

The C.P.R. motor car which was operated between Montreal and Vaudreuil, in the summer of 1906, was changed during last winter so as to burn coal instead of oil, as last year's experience showed that there was not sufficient advantage in burning oil to compensate for the additional cost. The boiler has also been turned round, partly to enable it to be more conveniently fired with coal and partly on account of the rearrangement of details of the superheater in order to avoid the burning out of the superheater tubes, which occurred once or twice last year. These are practically all the alterations made, but there were some repairs necessary to such portions as showed wear, which, however, amounted to very little. The car has not been operated this year as in consequence of the second track and bridge work which is going on on the Montreal-Vaudreuil section, it was felt that no extra service in addition to the regular steam trains could be conveniently given. It was proposed to operate the car between Toronto and Brampton for suburban traffic, but this idea was abandoned. The operation of this car in 1906 is said to have been satisfactory from a mechanical standpoint, but the service was too exacting for one car, its daily run being 184 miles in train service and 10 miles in terminal run. There should be at least two, or possibly three cars, in order to give such a service satisfactorily.

Canadian Northern Ry. Construction, Etc.

Liverpool and Milton Ry.—Tracklaying on the line is about completed, and the connection with the Halifax and Southwestern Ry. has been made. Four spans of the new bridge across the Mersey River have been erected, and work is being rushed on the trestle across the docks at Liverpool.

St. John Valley Ry.—Wm. Mackenzie, of Mackenzie, Mann & Co., Ltd., recently made a trip of inspection over the company's eastern lines. Before returning to Toronto he said the project for the construction of a railway down the St. John River valley had not sufficiently developed for him to say anything about it.

Canadian Northern Quebec Ry.—Tracklaying is reported to be in progress on the cut-off between Garneau Junction and Quebec city, and it is expected that the line will be completed early in the summer of 1908. Plans showing the location of the company's line between the junction with the National Transcontinental Ry. at mileage 2.4 west from the Quebec Bridge, and a point north of St. Foye road, have been deposited in the registry office of the county of Quebec, at Quebec city.

The line connecting the Montford branch —the old Montford and Gatineau Colonization Ry.—with the company's line at St. Jerome, has been completed, and was opened for freight traffic Aug. 26, and for passenger traffic, Sept. 16. The new line extends from St. Jerome, and effects a junction with the old line near Morin's Flats, 21.6 miles. The old line extends to Huberdeau, 26 miles, giving the branch a total length of 47 miles.

The construction of the branch from St. Jacques to Rawden, Que., about nine miles, has been started, the company doing the work direct. It is expected to have it completed this year.

Canadian Northern Ontario Ry.—A plan showing the location of the company's projected line in the county of Two Mountains, Que., mileage 19.6 to mileage 38 east of Hawkesbury, Ont., has been deposited in the registry office at Ste. Scholastique, Que. The construction gangs on the extension of the line from Hawkesbury to Ottawa have reached that city, and grading is well in hand. It is not expected, however, that the line will be completed as early as was anticipated, but H. K. Wicksteed, C.E., says that trains will be running over it by the end of the year. The entrance of the line into Ottawa has not been finally determined upon, but it is expected that for the present the entrance will be over the tracks of one of the existing lines from Hurdman's Bridge.

Canadian Northern Ry.—After several conferences between officials of the C.N.R. and the G.T. Pacific Ry., D. D. Mann, Vice-President C.N.R., stated Sept. 12, that the difficulty experienced in reaching a satisfactory agreement respecting the proposed union station at Winnipeg, was on account of the fact that the site at present in view did not contain sufficient room to adequately accommodate both companies to the extent they would really need. He added: "We have abandoned the idea of building the hotel in the terminal, as the limited space will not allow of it, and it will be built nearer the business center of the city if possible. Anyway that is a matter that can be deferred for the present, as the first consideration is a good terminal."

Work has been started on the new roundhouse for the company at Dauphin, Man. The building is to be of solid brick. S. Brown, Winnipeg, is the contractor.

A new roundhouse is in progress of construction at Brandon, Man., the May-Sharpe Construction Co., Winnipeg, being the contractors. The building is expected to be completed early in Nov. Replying to a deputation Sept. 8, M. H. McLeod, General Manager, stated that he could not make any definite promise when the erection of the new station at Brandon would be commenced.

Work is being proceeded with upon the grading of the line from Etiomami, Sask., towards Hudson Bay. It is stated that it is the intention of the company to bring in large quantities of supplies during the coming winter, which will be cached at points along the right of way for use of the engineers and contractors during the following summer.

A start has been made upon the construction of the line from Saskatoon to the Goose Lake district. Contractor McCrimmon's plant reached Saskatoon from Edmonton, Sept. 12, and a camp was pitched at Bonehill, about 18 miles out. Gangs of men were set to work in both directions. A. J. Sill is engineer in charge of the work.

D. D. Mann, Vice-President, stated in an interview at Edmonton, Alta., Sept. 4, that six construction trains were at work between Vermillion and Edmonton, engaged in strengthening the line. As soon as this section of the line is completed the work of reballasting the section between Vermillion and Battleford will be taken in hand. The great trouble with the railways west of Winnipeg was the want of coal. The whole foothills country, from the Yellowhead pass to the International boundary, is an immense and continuous coal field, and it was imperative that the Canadian Northern Ry. extend its system as quickly as possible to tap these coal fields. This extension, said Mr. Mann, would be the first thing to receive the company's attention in 1908.

D. D. Mann, Vice-President, reached Vancouver, B.C., Sept. 8, and stated in an interview that the company was ready to complete the line through British Columbia to Vancouver if the Provincial Government provided a substantial subsidy. Such a line from Vancouver to the main line would, said Mr. Mann, be probably constructed before the main line was completed. He further stated that it had been decided that the Pacific terminus of the C.N.R. would not be at Port Simpson. Several plans were under consideration, but he was not in a position to make any announcement. He subsequently proceeded to Victoria, where he had several interviews with the Provincial Government upon the subsidy question. (Sept., pg. 665.)

The Northern Construction Co. has been registered under the Northwest Territories, ordinance respecting foreign corporations.

There is no foundation, we are advised, for the recent press reports that the G.T.R. had decided to appoint auditors to make ticket collections on its trains in place of conductors, as at present.

The Department of the Interior has issued a map of the Dominion, giving a view of the whole railway system. It is of convenient size, and while not all the railways, nor all the branches of the trunk lines, are shown, the principal lines are indicated in such a way that it can be readily seen where they come in contact one with the other, and their relative importance.

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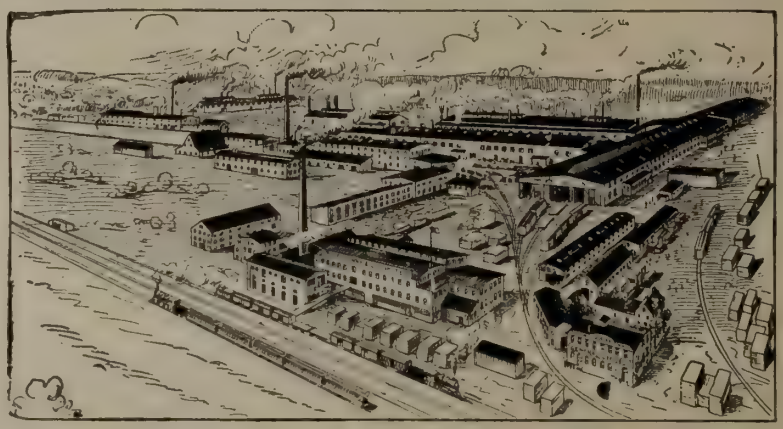

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TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Canadian Westinghouse Co. has declared a quarterly dividend of 1½%, payable Oct. 1, to shareholders of record Sept.24.

The Canadian General Electric Co. has been registered at Regina, Sask., under the North-West Territories ordinance respecting foreign corporations.

Mussens Limited, Montreal, has issued catalogue 15 of railway mining and contractors' supplies, etc., containing 639 pages, profusely illustrated.

Hayes Track Appliance Co., Geneva, N.Y., has issued circulars 47 and 48, giving some new illustrations and descriptive matter of the derails which it manufactures.

K. W. Blackwell has resigned his position as General Manager of the Montreal Steel Works, but retains the office of President. He is succeeded as General Manager by W. F. Angus.

Golden-Anderson Valve Specialty Co., Pittsburg, Pa., has issued catalogue 9 of its steam and water specialties, including automatic valves and traps for steam and water service, which are largely used by railway and navigation companies.

The Brown Hoisting Machinery Co., Cleveland, Ohio, has issued an illustrated catalogue of its "Brownhoist" locomotive cranes, with grab buckets, for handling ore, coal, limestone, slag, etc. The illustrations show the cranes handling ore from stock hills, gondola cars, etc.

The Chicago Pneumatic Tool Co.'s statement for the half-year ended June 30, shows profits of $507,528.12, less depreciation and written off, $108,633.58, leaving net profit, $398,894.54. After setting aside $82,500 for bond interest and sinking fund reserve, there remained a balance of $190,818.88, which was carried to surplus account, making the total to the credit of that account, $1,069,-228.32.

The American Locomotive Co. has issued the tenth of its series of catalogue pamphlets, which illustrates and describes the prairie type locomotives built for various roads. This pamphlet contains half-tone illustrations and the principal dimensions in tabulated form of 15 different designs of locomotives of this type, ranging in weights from 136,000 to 245,000 lbs. The pamphlet begins with a description of this class of locomotives and presents the advantages which it offers for fast freight and passenger service.

Klondike Mines Ry.—Application will be made next session of the Dominion Parliament for an act authorizing the company to extend its line to Edmonton, Alta. The line already extends from Dawson, Yukon, towards the Stewart River, and the projected extension would follow the Stewart River Valley, and proceed by the Great and Lesser Slave Lakes to Edmonton. The total length of the line would be about 1,400 miles. It is stated that the company will not ask for a Government subsidy, but will ask that the Dominion Government guarantee its bonds. (Sept., pg. 663.)

The 52nd annual convention of the American Association of General Passenger Agents will be held at Washington, D.C., Oct. 15 and following days.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska.—A company has been organized to construct an electric railway from Valdez, Alaska, to the copper country, about 180 miles. A large number of men are reported to be engaged upon construction work, and it is expected to complete about 34 miles this fall. H. D. Reynolds, of Valdez, Alaska, and Seattle, Wash., is one of the promoters.

On the Tanana Valley Ry. work is in progress upon an extension from Gilmore to Chuteneka, Alaska, 20 miles. Grading has been completed upon the first ten miles. Upon the completion of the line to Chuteneka, it is intended to continue the line to Cleary Creek, a further distance of six miles. (Sept., pg. 663).

Atlantic, Quebec and Western Ry.—The recently completed line between Paspebiac and Port Daniel, Que., was opened for traffic Sept. 1. We are advised that while the company is doing certain work at three different points between Port Daniel and Gaspe, no contract covering the construction of that portion of the line has been let. (Sept., pg. 665.)

The Bessemer and Barry's Bay Ry. extends from the Central Ontario Ry., near L'Amable station, Dungannon tp., Hastings County, easterly to the village of Bessemer, where the properties of the Mineral Range Iron Mining Co. are situated. Construction was commenced in July, 1906, and the first five miles of line, less 800 ft., were completed Jan. 15, on which date the first carload of magnetite iron ore was moved from no. 4 mine. It is intended to extend the line at an early date, for a distance of 2½ miles, so as to connect up the furthest group of mines. This group has a known area of 1,200 ft. square. The company contemplates eventually extending its line on through Craigmont and Combermere to Barry's Bay. The line is standard gauge, and is laid with steel rails, originally 65 lb. Since the line was opened, nearly 20,000 tons of freight have been carried, and it is expected that a considerable quantity of lumber will be handled. During the present season the company has done considerable work on the road-bed in the way of ballasting, etc., so that it is now in a very good condition. (Oct., 1906, pg. 583.)

Crow's Nest Southern Ry.—Reports from Fernie, B.C., state that the company is extending its line from that point northerly to Michel, 20 miles.

Dominion Atlantic Ry.—The extension of the D.A. Ry. to the Annapolis Iron Co.'s mine shaft at Torbrook is nearly completed, and is expected to be in operation in Oct. (Jan., pg. 1.)

Gunflint and Lake Superior Ry.—The Minnesota, U.S., charter authorizing the construction of a railway from Gunflint, near which point the old Port Arthur, Duluth and Western Ry., now part of the Canadian Northern Ry., at present has its terminal, to Lake Superior, is reported to have been sold to W. Alexander, Warsaw, Wis.

Great West Ry.—The Great West Coal Co. has been organized at Port Arthur, Ont., with J. J. Carrick as President, and J. J. O'Connor as Secretary-Treasurer, for the purpose of developing some 12,000 acres of coal lands in Alberta. In addition to the coal areas the company, for which a charter of incorporation is being obtained, has acquired the charter of the Great West Ry. The North West Coal and Coke Ry. was incorporated by the Dominion Parliament in 1903, and in 1905 an extension of time for the construction of the railway was granted and the name of the company was changed to the Great West Ry. The company has power to construct a railway from Bull Park to the C.P.R. Crow's Nest Pass line near Cowley Alta. (May, pg. 323; June, 1905, pg. 243; July, 1903, pg. 239.)

Indian River Ry.—At the annual meeting of shareholders held at Quebec Sept. 4, it was decided that construction work should be commenced within a year. Following are the officers and directors for the current year: President, M. P. Davis; Vice-President and General Manager, W. Tettengill, Rumford Falls, Me.; other directors: W. P. Davis, L. A. Cannon, G. Parent; Treasurer, G. W. York, Portland, Me.

Intercolonial Ry.—M. J. Butler, Deputy Minister of Railways, upon completing an inspection of the I.C.R. recently, said: "We made the whole trip by daylight and ran at high speed, making stops at every point where there was work going on. I did this for the purpose of testing the track and at the same time seeing every mile of the system by daylight. The roadbed was never in better shape; as far as rails, ballast and bridges are concerned, there is not a better road to-day in America." Speaking of the construction of the new shops at Moncton, Mr. Butler said: "The work is going on well, and is being thoroughly done. The contractor is putting up the best quality of steel and cement structural work. The car shop will be ready for use this autumn. The locomotive shop will not be ready so soon. There has been some delay occasioned by continued wet weather, during which cement work cannot be done, by scarcity of labor and by delay in delivery of structural steel. We have to get this from Scotland. The Canadian firms are so piled up with orders that we would not have been able to get materials from them for at least a year. However, good progress is being made, and when the shops are completed the I.C.R. will be thoroughly provided with repairing and construction facilities."

A flour shed is under construction at York Point slip, St. John, N.B. It will be 202 by 140 ft. Flood and Bates are the contractors.

Tenders are under consideration for the construction of a concrete and brick machine shop and boiler house at Riviere du Loup, Que. (Sept., pg. 663.)

Kettle Valley Lines.—Grading and tracklaying are in progress on the extension from Grand Forks, B.C., up the Kettle River to McKinley mine, 50 miles. It was expected to have the track laid from Grand Forks to Lynch Creek by Sept. 30. (Aug., pg. 561.)

Kingston, Smith's Falls and Ottawa Ry.—A letter from A. T. Drummond, respecting the route of entrance of this projected railway into Ottawa, is before the city council. Some years ago the council voted $50,000 to the company towards the construction of its railway, but nothing was done towards earning it. The company has been taken up by the G.T.R., and an assurance given that as soon as the location plans have been approved of by the Government, construction will be started. The application to have these plans approved by the Railway Commissioners was made by the G.T.R. legal department, and we are advised that while the company is not a G.T.R. one, traffic arrangements have been made between the two companies. (Sept., pg. 663.)

London and Port Stanley Ry.—The new bridge over the Thames near London is practically completed, and the new bridge at Kettle Creek, near St. Thomas, is expected to be finished by Oct. 1. It is being built of reinforced concrete. The quantities of materials used being: 400 cords of gravel, 19 tons of steel, and six carloads of Portland cement. (Aug., pg. 563.)

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The Mabou and Gulf Ry. line extends from the Mabou mines to Mabou Harbor, N.S., about five miles. It is graded and partially constructed to a junction with the Inverness Coal and Ry. Co.'s line, about three miles from Mabou Harbor. It handles the output of the Mabou mines and a tug service in Mabou Harbor; no passenger trains are at present operated on the railway. We are advised that it is planned to complete the line between Mabou Harbor and the Inverness Coal and Ry. Co.'s line in 1908. W. P. Deppe, Mabou Mines, is President, and A. A. Mackay, Halifax, N.S., Secretary-Treasurer.

Midway and Vernon Ry.—R. W. Morris, an English civil engineer, arrived in Vernon, B.C., Aug. 28, and made a trip of inspection over the route of this projected railway. It was stated that he would report to a British syndicate which contemplates undertaking the construction of the line. (July, pg. 479.)

Reid Newfoundland Co.—A drawbridge to carry the railway over the Main River, Newfoundland, is being completed.

Sydney and Louisburg Ry.—We are officially advised that the Dominion Coal Co. has been making some surveys to ascertain the best line for connecting the Victoria-Luigan mine areas with the main line of the S. and L. Ry. So far these surveys are merely preliminary, and a definite location has not been selected. It is probable, however, that the location which will be adopted will leave the main line somewhere between the Old Gardner mine and Grand Lake, running down approximately in the middle of the peninsula towards the Old Victoria mine. The company has not reached any definite decision as to when construction will be undertaken. (Sept., pg. 665.)

Temiskaming and Northern Ontario Ry.—The erection of a building at North Bay, Ont., for use as a stores department, and offices for the Master Mechanic, is being proceeded with.

The scarcity of steel is causing considerable delay in construction upon the line. The bridges at Wabi and Watybeag, which were to have been completed in May, had not been completed Sept. 12. The severe rains of Aug. caused landslides at Taylor's Creek, near Englehart, and prevented supplies of heavy material being taken in The scarcity of labor is also preventing the carrying on of work on the line as speedily as was anticipated. (Sept., pg. 665.)

Vancouver, Victoria and Eastern Ry. and Navigation Co.—An order has been issued by the Board of Railway Commissioners granting permission to the V., V. and E. Ry. to carry its line along a portion of the river road in the municipality of Delta, B.C. (Sept., pg. 665.)

Vancouver, Westminster and Yukon Ry.—At the recent sittings of the Railway Commissioners in Vancouver, a number of matters affecting the construction of this line were considered and disposed of. Permission has been given to build a line round False Creek, but its lines will have to join, not cross the C.P.R. tracks, unless a further order is obtained. See also National Transcontinental Ry. (May, pg. 327.)

The Victoria Terminal Ry. and Ferry Co. is taking proceedings for the expropriation of additional lands at New Westminster, B.C., for the extension of its lines there. (Aug., pg. 565.)

White Pass and Yukon Ry.—Reports from Dawson, Yukon, state that it is expected to start construction on a line from Whitehorse to the copper mine camps, about 20 miles, early next year. It is expected that the extension will handle 1,000 tons of ore daily.

Winnipeg City Power Line.—The City of Winnipeg has under consideration tenders for the equipment of its power station at Point du Boise, its transmission line to Winnipeg, and the distributing station in Winnipeg, for the construction of a bridge across the Winnipeg River, and for rolling stock for its tramway. The tender of C. A. Tiefft for clearing the right of way from Lac du Bonnet to Point du Boise, 22 miles, has been accepted. (Sept., pg. 665.)

Yukon.—The Yukon Legislature has adopted a memorial to the Dominion Parliament, asking that a subsidy be voted for an all-Canadian railway from some transcontinental Canadian railway to Dawson. The G.T. Pacific Ry. has power to construct a line from near Edmonton, Alta., on its main line, to Dawson; and the Vancouver, Westminster and Yukon Ry., has power to construct a line to Dawson through British Columbia. Press reports recently credited the G.T. Pacific Ry. with having arranged to purchase the V., W and Y. Ry. charter.

National Transcontinental Railway.

An agent of the National Transcontinental Ry. Commission is reported to have purchased about three acres for right of way about three miles from Moncton, N.B. Nothing has been done towards purchasing right of way between that point and Moncton, as the exact point of junction with the Intercolonial Ry. does not appear to have been finally determined upon.

The G.T. Pacific Ry. Co. has sublet contracts as follows: 50 miles west from Moncton to J. H. Corbett, a Pennsylvania contractor, and for the next eight miles to J. W. McManus Co., Ltd., Memramcook, N.B. This eight miles includes a large steel bridge over the Salmon River, and about a mile of line to connect with the New Brunswick Coal and Ry. Co.'s line. Work has been started on this eight mile section.

GRAND TRUNK PACIFIC RY.

Work is in progress at various points on the line between Winnipeg and Portage la Prairie, Man., but the contractors—Treat and Johnston—are meeting with considerable difficulty in getting men. The McDonald, McMillan Co. expected to finally complete the grading from Portage la Prairie to the Touchwood Hills, 275 miles, by the end of Sept. A report received by the Dominion Government at Ottawa gives details of the progress of construction up to Aug. 31. At that date steel had been laid for 124 miles west of Portage la Prairie, and of this mileage 87 miles is ballasted. Of the grading between Portage la Prairie and Saskatoon, 85% had been completed. There were 1,100 men and 800 teams at work on the 462 miles between Winnipeg and Saskatoon. On the line between Saskatoon and Edmonton, Alta., the grading is being pushed, and the greater part of the distance is about ready for the ties. Plans have been filed in the Dominion Land Office at Edmonton, showing the route through that city. A double track is shown, and it branches south at the intersection with the Canadian Northern Ry. Thence it runs north paralleling the south side of the Queen's avenue school between First and McDougall, then westerly, cutting off the corner of the St. James hotel to McKenzie, and along that avenue due west to Twenty-first St., where it recrosses the C.N.R. and runs due north, joining the main line in what is known as the Hagman estate. The right of way passes through the grounds of Queen's avenue school, and will also mean the tearing down of the St. James hotel.

A recent letter from Barkerville, Cariboo county, B.C., says that about 100 miles of the G.T. Pacific in that vicinity had not been definitely located. Three engineers, Leask, Horner and Gunn, are in the field working to fill the gap. The route being surveyed leaves the north bank of the Fraser at Five-mile Bend, above the Grand canyon, goes through a pass at the head of Tonaquah creek, and down that creek to its mouth on the Fraser, ten miles below the canyon. This part of the line is to avoid following the Fraser through the Grand canyon, where two tunnels would be necessary. The new survey crosses to the south bank of the Fraser; goes up Goat River a short distance, crosses to Bear River; thence via Otter and Eagle lakes to Willow River, and down Willow river to its mouth. It will probably cross to the north bank of the Fraser at the mouth of Little Salmon River, where there will be a single span bridge on solid rock. It is expected that steps will be taken at an early date to let contracts for the 700 miles between Edmonton and Prince Rupert, B.C.

We are advised that a contract has been let to Foley Brothers, Larson & Co. for the grading along a certain portion of the company's projected line in British Columbia, but that details of the same have not been settled. Local press despatches state that this contract covers the grading of the line between Kitamaat and the headquarters of the Copper River, and that the route will follow the location staked out for the Pacific, Omineca and Northern Ry., the charter for which was acquired by the G.T. Pacific Ry. A start was made Aug. 17, when the first sod was cut. There will be a good deal of rock cutting, and this will be gone on with throughout the winter. A wagon road will be cut the entire length of the Kitamaat branch, and supplies will be got in during the winter.

The question of the entrance of the company's line into Vancouver is being discussed and press reports state that the charter of the Vancouver, Westminster and Yukon Ry. had been purchased, but J. Hendry, President, is quoted as stating that the line has not been sold. He further stated that the line would be constructed from Vancouver northward with the direct object of tapping the G.T. Pacific Ry., and giving that railway a connection with Vancouver.

A press report states that on the return of Chief Railway Commissioner Killam to Ottawa from the West early in Oct., the Board will take up the complaints of alleged discrimination in freight rates in favor of Winnipeg as against other western points. Among the other questions to be dealt with by the Board are the Bell Telephone Co.'s rates, the express companies' rates, standard operating rules for railways, the re-classification and authorization of new schedules of maximum freight rates, the adoption of new forms for bills of lading, the drafting of new regulations affecting the safety of passenger trains in the matter of heating, lighting, etc., and the settlement of the Toronto union station problem.

Canadian Northern System Terminals has been incorporated under the Dominion Companies Act, with a capital of $2,000,000 and offices at Toronto, to lay out, construct, purchase, lease or otherwise acquire, maintain, operate and manage terminals, transportation, warehouse and storage facilities, yards, stock yards, etc., and tracks and equipment for the movement, care storage, or handling any merchandise or traffic; passenger facilities and accommodation, hotels, parks, amusement resorts, etc.; grain elevators and cleaning plants, steamships and vessels, piers, docks, dry docks, wharves, slips, etc.; smelters and furnaces, mines, power-houses and structures, and for a number of other objects necessary in connection with either of these businesses. The provisional directors are: G. Ruel, A. J. Mitchell, J. B. Robertson, R. P. Ormsby, F. C. Annesley, L. W. Mitchell, Toronto; all of whom are in the employ of Mackenzie, Mann & Co. (Ltd.)

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THE VULCAN IRON WORKS CO., 113 Vulcan Place, TOLEDO, OHIO.

MAINLY ABOUT PEOPLE.

A. H. Campbell, Vice-President of A. C. Leslie & Co., Montreal, died in that city, of typhoid fever, Aug. 26.

W. Whyte, son of W. Whyte, Second Vice-President C.P.R., was married at Winnipeg, Sept. 4. to Miss M. M. Blair.

Mrs. M. McLellan, wife of W. M. McLellan, of the Ottawa Forwarding Co., Ottawa, died there Sept. 15, aged 67.

Lady Shaughnessy, with two daughters, sailed from Quebec for Great Britain on the Empress of Britain, Sept. 27.

A. Dulhanty, trackmaster Cumberland Ry. and Coal Co., left Parrsboro, N.S., Sept. 13, on a trip to the U.S.

P. J. Ryan, for many years one of the principal operators in the C.P. Telegraph Department, died at Montreal Sept. 17.

W. Mackenzie, President Canadian Northern Ry., was a successful exhibitor of Jersey cattle at the recent Toronto Exhibition.

Jas. T. Scanlan, lumberman, who died in Montreal, Sept. 12, was son of M. Scanlan, of the Dominion Steamship Co., Montreal.

Mrs. M. Farrell, wife of T. Farrell, late manager for the Hendrie cartage agency at St. Catharines, Ont., died there Sept. 14.

Mrs. Pullen, wife of J. Pullen, Assistant Freight Traffic Manager, G.T.R., died at Montreal, after a serious operation, Aug. 22.

A. W. Shearwood, Secretary of the Dominion Bridge Co., Montreal, died in the General Hospital there, Sept. 6, after a lengthened illness.

T. A. Gillick, commercial agent, Chicago, Milwaukee and St. Paul Rd., at Winnipeg, Man., was married at St. Paul, Minn., Sept. 4.

Admiral Sir A. H. Markham, who has written extensively on navigation in Hudson Bay, spent some days in Toronto at the end of August.

M. K. Cowan, K.C., assistant solicitor G.T.R., is recovering from an attack of pleurisy, and is spending some time at Saranac Lake, N.Y.

Miss F. I. Swinford, daughter of Mayor Swinford, General Agent Northern Pacific Road, Winnipeg, was married there to C. D. Corbould, Sept. 3.

D. McEwen, employed on the C.P.R. engineering staff on the Crow's Nest Pass Line, had one of his legs amputated recently as the result of injuries.

Major-General M. L. Synge, of the Royal Engineers, who died in Great Britain recently, was connected with the surveys for the C.P.R. in the early days.

K. Copeman was presented with a gold watch by the staff of the C.P.R. steamship department, Quebec, recently, on leaving the company's service.

Mrs. Johnson, wife of W. T. Johnson, for a number of years C.P.R. ticket agent at the Chateau Frontenac, Quebec, died at Montreal, Sept. 14.

Miss S. L. Panser, daughter of C. J. Panser, C.P.R. roadmaster, Winnipeg, Man., was married there recently to M. Feely, of the Manitoba Cartage Co.

Jas. Hardwell, chief traffic officer, Board of Railway Commissioners, has been staying at Preston Springs, Ont., to recuperate after his recent illness.

H. Harding, Local Secretary of the Canadian Northern Ry. in London, Eng., reached Montreal, Sept. 13, and is making a trip over the company's line.

F. A. Hibbard was presented with a purse of gold by the engineering staff of District B, National Transcontinental Ry., Sept 17, on his leaving the service.

Alex. McDonald, Toronto, Building Foreman G.T.R., was struck by a train at London, Ont., Aug. 23, and died in the Victoria Hospital there from his injuries.

W. Pugsley, formerly Premier of New Brunswick, has been appointed Minister of Public Works for the Dominion, succeeding Hon. H. S. Hyman, resigned.

Capt. C. H. Jenks, who died at Crookstown, Minn., recently, was for a number of years Superintendent of the Northern Division of the Great Northern Ry., U.S.

Lieut.-Col. Sir Henry M. Pellatt, who is associated as a director with a number of transportation companies in Canada, has been promoted to the rank of Colonel.

Mrs. J. P. Hawkins, who died at Sherbrooke Aug. 23, was sister of J. H. Walsh, General Manager Quebec Central Ry., and of T. and P. Walsh, of the same company.

W. H. Heskett, who moved to Winnipeg recently as assistant storekeeper, C.P.R., died in the general hospital there from typhoid fever, Sept. 10, aged 39.

J. E. Hutchison, heretofore chief clerk at the C.P.R. Royal Alexandra Hotel, Winnipeg, was presented with a purse of gold by the staff on leaving for Montreal, Sept. 1.

O. Morency, local purchasing agent and superintendent of stores for the Transcontinental Ry. Commission at Quebec, was married there, Sept. 16, to Miss B. Samson.

G. H. Woolley, one of the directors of the Furness-Withey Co., steamship owners, managers and builders, and the company's manager at New York, died there Sept. 12.

J. Law, who died at London, Ont., Sept. 5, was for many years track superintendent of the Great Western Ry., and its successor the G.T.R. retiring from active service in 1893.

T. A. de Gaspe, who died at Montreal, Aug. 27, aged 85, had been in the G.T.R. employ for over 50 years. He was a nephew of the late P. A. de Gaspe, a well-known Canadian author.

T. Williams, Superintendent C.P.R., Farnham, Que., is reported to be recovering satisfactorily from his recent accident and is expected to return to his office in about a month.

F. O. Lockhart, who has been appointed Chief Train Dispatcher, Atchison, Topeka and Santa Fe Rd., at Raton, N.M., is a son of W. J. Lockhart, trackmaster, Intercolonial Ry., Moncton, N.B.

The body of A. H. Birks, who was engineer in charge of the erection of the Quebec bridge for the contractors, was found floating in the river, Sept. 11. He was on the structure at the time of the collapse.

J. W. Goodall, who died at Toronto, Aug. 26, aged 89, was father of J. H. Goodall, chief clerk in the District Passenger Agent's office, G.T.R., Toronto, and of A. Goodall, G.T.R. train dispatcher, Barrie.

E. V. Slocum, Vice-President Safety Car Heating and Lighting Co., New York, was married at Montreal on Oct. 2 to Miss Maud Baker, eldest daughter of W. R. Baker, Assistant to the President C.P.R.

J. U. Gregory, representative of the Department of Marine at Quebec, presented a handsome prize for competition at the yacht races of the Quebec Yacht Club, Sept. 5. He is Honorary Commodore of the club.

D. D. Mann, of Mackenzie, Mann & Co., has successfully appealed against an assessment of $49,000 on income at Toronto, on the ground that he is now residing at Scarboro Cliff Park, just east of Toronto.

Dr. W. Merrill, C.P.R. surgeon at Chapleau, Ont., who died at Ottawa from cerebro-spinal meningitis in Sept., was a nephew of Mrs. C. W. Spencer, wife of the General Manager of Mackenzie, Mann & Co., Eastern Lines.

V. I. Smart, heretofore Signal Engineer of the Chicago and Eastern Illinois Ry., has been appointed an assistant professor in the Transportation section of the Faculty of Applied Science at McGill University, Montreal.

H. G. McMicken, European representative of the Great Northern Ry., U.S., arrived in Montreal, Sept. 16, and will visit Winnipeg, Man.; St. Paul, Minn., and other points before returning to London, Eng.

Hon. J. S. Hendrie, President of the Canadian Artillery Association, has been made a Commander of the Royal Victorian Order, in connection with the recent visit of the British Artillery Association's teams to Canada.

The administration building at the King Edward Sanitarium for Consumptives at Weston, Ont., which was opened by Earl Grey, Aug. 28, was the gift of H. C. Hammond, President Northern Navigation Co.

Capt. D. J. Kennelly, for many years manager of the Sydney and Louisburg Coal and Ry. Co., until the merger with the Dominion Coal Co. in 1893, died at Sydney, N.S., Aug. 28, aged 76, after an operation for cancer.

F. H. McGuigan, formerly Fourth Vice-President, G.T.R., has recovered from his recent indisposition and was in Montreal in the middle of September. He declined to make any statement as to his future engagements.

D. D. Mann, Vice-President C.N. Ry., was reported, Aug. 31, to be seriously ill at Winnipeg, but telegrams dated Sept. 6 stated that his indisposition had been greatly exaggerated, and that he had left for Edmonton, Alta.

J. Scriver, who died at Hemmingford, Que., Sept. 5, aged 82, was interested in the development of railways in Huntingdon county, and was president of one of the local companies subsequently absorbed by the G.T.R.

G. A. Oulton, Travelling Freight and Passenger Agent, Illinois Central Rd., Boston, Mass., was married there, Sept. 5, to Miss M. D. Neal. He is a son of G. H. Oulton, of the railway mail service, St. John, N.B.

Hon. G. P. Graham, Minister of Railways and Canals, was elected by acclamation Sept. 18 to represent Brockville, Ont., in the House of Commons. He previously represented the constituency in the Ontario Legislature.

A. M. McLellan, chief clerk to W. B. Mackenzie, Chief Engineer Intercolonial Ry., was married in Moncton, N.B., Sept. 11, to Miss M. B. Thomson. He was presented with a cabinet of silver by the engineering staff prior to the ceremony.

S. J. Kearns, for some years prior to 1888 connected with the G.T.R. at London, Ont., of which city he is a native, has been appointed Assistant Superintendent Western Division New York Central and Hudson River Rd., Syracuse, N.Y.

Jos. Paquet, contractor for the La Tuque branch of the Quebec and Lake St. John Ry., has been appointed a Justice of the Peace for the districts of Quebec and Three Rivers, under the provisions of article 2572 of the revised statutes of Quebec.

F. A. Valentine, heretofore travelling passenger agent C.P.R., Los Angeles, Cal., who was recently transferred to Spokane, Wash., has been missing since Aug. 11, and it is alleged that he has left financial entanglements amounting to nearly $4,000.

W. R. Baker, Assistant to the President C.P.R., who has been a widower for several years, will be married in the near future to Mrs. Drysdale, who is a daughter of the late Andrew Paton, of Sherbrooke, Que., and a sister of Mrs. H. S. Holt, of Montreal.

W. L. Morkill, heretofore General Manager of the Mexican Southern Ry., has

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FIRST TRIP June 30 — LAST TRIP Sept. 10 1907

No. 200	WILL LEAVE	No. 199
Daily except Saturday,	Montreal, 19.30	Daily except Sunday, - Halifax, 8.45
Daily except Sunday, - -	Levis, 24.10	Daily except Sunday, - St. John, 11.00
	WILL ARRIVE	
Daily except Sunday, -	St. John, 17.30	Daily except Monday, - - Levis, 2.50
Daily except Sunday, -	Halifax, 20.15	Daily except Monday, - Montreal, 7.30

FIRST TRIP June 29 — LAST TRIP Sept. 10 1907

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For Time Table with descriptive notes apply to principal agents or GENERAL PASSENGER DEPARTMENT, MONCTON

resigned to become General Manager of the Peruvian Corporation—a British company trading throughout South America. He formerly resided at Sherbrooke, Que.

John Little, who for a number of years was chief of the land department of the old Great Western Ry., died at Annandale, Scotland, Aug. 16. He was a volunteer officer during the Fenian raid, and for three years was a member of the Canadian team at Wimbledon.

W. C. Hall, formerly Superintendent C.P.R. at Quebec, died there Sept. 15, aged 76. He was originally employed on the G.T.R., then on the Levis and Kennebec Rd., and subsequently on the North Shore Ry., remaining with the C.P.R. when it took over this line.

W. G. McWilliams, who died at Wellington, Prince Edward County, Ont., Aug. 23, was at the time engaged upon some special legal work for the Central Ontario Ry. J. D. McWilliams of the C.P.R. engineering staff, Toronto, is a son, and another son, W. N., is also in the C.P.R. service.

W. Whyte, second Vice-President C.P.R.; A. M. Nanton, Managing Director, Alberta Ry. and Irrigation Co.; J. A. M. Aikens, Local Solicitor C.P.R.; and E. L. Drewry, are among the provisional directors of the Winnipeg City Band Co., recently incorporated under the Manitoba Companies' Act.

The engagement is announced of Miss Marion Dunsmuir, fourth daughter of Jas. Dunsmuir, Lieut.-Governor of British Columbia, and principal owner of the Wellington Collieries and Ry. Co., to M. Lampson, who represented the Imperial Government on the recent tour of Prince Fushimi in Canada.

While making a trip of inspection over the Halifax and South-Western Ry., Aug. 28, a private car, in which were travelling W. Mackenzie, of Mackenzie, Mann & Co., Ltd., and C. W. Spencer, General Manager of the firm's Eastern Lines, was wrecked. The occupants escaped without sustaining any injuries.

W. F. Biggar, who died at Grand Haven, Mich., recently, aged 65, was a native of Niagara, Ont., and was for a number of years engaged as an engineer upon railway construction work in Canada. He was Superintendent of the Welland Canal, and after going to the U.S., was on the engineering staff of the Michigan Central Rd. for some years

G. T. Davie, who died at Levis, Que., Sept. 1, aged 79, had been engaged in shipbuilding there for many years. He was head of the firm of G. T. Davie & Sons, owning the dry docks and patent slips, the ship repair yards at Levis, and a wrecking plant. He had been, also, for many years, a director of the Quebec Steamship Co., and of the Quebec and Levis Ferry Co.

J. G. G. Kerry, who was appointed one of the commissioners to investigate the collapse of the Quebec bridge, now resides in Toronto, and had previously been appointed by the Department of Railways to investigate the railway situation between Toronto and Ottawa with a view of assisting the department in arriving at a conclusion as to the best location for the Canadian Northern Ontario Ry. and other lines.

F. Nicholls has presented to the Royal Canadian Yacht Club, Toronto, a starboard side-light which formed part of the equipment of the torpedo boat destroyer Raztorophy, blown up in Chefoo Harbor by the Russians to prevent her falling into the hands of the Japanese. He secured this interesting relic from Capt. Scott Harden, war correspondent of the London Graphic, while in England recently.

The tablet erected in Salisbury Cathedral, Eng., in memory of those killed in the disaster to the steamship express on the London and South-Western Ry. there, July 1, 1906, was unveiled Aug. 20. It was dedicated by the Bishop of Salisbury, and an address was made by the U.S. Ambassador. The names of the 28 killed, including Rev. E. L. King, W. Barwick, K.C., and C. A. Pipon, of Toronto, are appended to the inscription.

P. Webb, who has resigned his position as Superintendent of the Locomotive and Machine Co. of Montreal, will return to the United States. He was chief draughtsman for the C.P.R. in its early days, prior to going into the service of one of the locomotive building companies in the U.S. merged in the American Locomotive Co. He is a brother of Capt. M. Webb, who lost his life in an attempt to swim the whirlpool at Niagara River in the early 80's.

E. A. Stone, who has been appointed Professor of Civil Engineering at Dalhousie University, N.B., in succession to Prof. B. Jack, is a native of Charlottetown, P.E.I., and a graduate of McGill University. He was on the C.P.R. engineering staff for four years in the bridge department, and was subsequently engineer and chief draughtsman for the Montreal Steel Co.; engineer for the Canadian Electro-Chemical Co., Sault Ste. Marie, Ont., and since 1902, structural engineer for the Canada Foundry Co., Toronto.

W. Kennedy, whose portrait appears on the first page of this issue, was born at Belleville, Ont., Dec. 23, 1869, and has been in the service of the G.T.R. continuously since 1883, his record being: 1883 to 1886, apprentice in the Belleville shops; 1886 to 1891, apprentice and journeyman in the Point St. Charles shops; 1891 to Sept., 1897, in charge of waterworks between Montreal and Toronto, under the Master Mechanic, with headquarters at Belleville; Sept., 1897, to June, 1901, locomotive foreman at Sarnia tunnel; June, 1901, to date, Master Mechanic, Middle and Southern Divisions, Toronto.

The testimonial presented to John Ennis, Passenger Manager of the Allan Line Steamships, Liverpool, Eng., who recently retired after 40 years' service, took the form of an illuminated address and a cheque. Mr. Ennis has taken up his residence in his native town of Wexford, Ireland, and was unable, owing to an accident, to journey to Liverpool to receive the presentation publicly. The committee having charge of the presentation included Lord Strathcona, chairman; Sir A. L. Jones, of the Elder-Dempster Co., Vice-Chairman; A. Dobell, Archer Baker, European Manager, C.P.R.; and T. Skinner, Director C.P.R.

F. W. Salsbury, District Passenger Agent C.P.R., Pittsburg, Pa., was stricken with paralysis in his office, Sept. 11, and died a few hours later in the West Penn Hospital. He was born Aug. 24, 1861, and entered railway service with the Duluth, South Shore & Atlantic Rd. in 1887, working on construction. From Oct., 1887, until Oct., 1888, he was agent at St. Ignace, Mich., and then for some time was travelling passenger agent. On Jan. 1, 1889, he was appointed chief clerk in the general freight office, which position he held until Oct., 1893, when he went to Pittsburg as commercial agent for the D., S.S. & A.R.R. and the Minneapolis, St. Paul & Sault Ste. Marie Ry. In April, 1897, he was made commercial agent of the C.P.R., and on July 1, 1902, district freight and passenger agent for the Canadian Pacific and its subsidiary lines. He is survived by his wife and one brother.

Detroit River Tunnel.—A cave-in occurred at the tunnel works under the Detroit River at Windsor, Ont., as a result of which Sandwich St. sank 6 ft. for a distance of 50 ft. Some 20 men were at work in the shaft at a depth of 60 ft., but owing to the gradual cave in of the soil they were able to get out without injury.

TRANSPORTATION APPOINTMENTS.

Atlantic, Quebec and Western Ry.—The following are the officers having charge of operations: General Manager, A. Lemieux, 409 Board of Trade Building, Montreal; Superintendent, F. C. Bouvier, New Carlisle, Que.

J. V. Nimmo, having resigned his position as Chief Engineer, of the new Canadian Company, Limited, and Resident Engineer of the Atlantic, Quebec and Western Ry, W. Lyon Browne has temporarily undertaken the duties.

Canadian Northern Ry.—S. S. Foley, heretofore Chief Train Dispatcher district 3, has been also appointed Trainmaster. Office, Dauphin, Man.

A. Brunton, heretofore Trainmaster district 3, at Dauphin, Man., has been assigned to other duties.

R. Nelson, heretofore Train Dispatcher district 3, has been appointed Assistant Chief Train Dispatcher, same district. Office, Dauphin, Man.

Chicago, Milwaukee and St. Paul Ry.—J. G. Thompson, heretofore connected with the Minneapolis, St. Paul and Sault Ste. Marie Ry. at Winnipeg, has been appointed Travelling Passenger Agent, C.M. and St. P. Ry., succeeding L. W. McConnell. Headquarters, St. Paul, Minn.

Canadian Pacific Ry.—Firemen G. David and T. Richmond have been appointed travelling firemen, district no. 2, Eastern Division. Their duties will be to instruct men in their duties as firemen, and to successfully fire locomotives. They will report to the locomotive foremen at both ends of the road, and notify them at once of anything they may consider a betterment of the service.

W. J. Brown has been appointed locomotive foreman at Toronto, succeeding T. Milne, transferred to London, Ont.

G. W. Lawson has been appointed Grain Agent, in charge of the issue of warehouse receipts on account of the company's lake front terminal elevators. Office, city freight department, McDermot Ave. and Main St., Winnipeg.

A. E. Stevens, heretofore Chief Dispatcher, district 2, Pacific Division, has been appointed Superintendent district 2, Central Division, succeeding J. T. Arundel, transferred to the Pacific Division.

F. H. Cummings has been appointed Chief Clerk at the Royal Alexandra Hotel, Winnipeg, succeeding J. E. Hutcheson, resigned.

W. H. Deacon has been appointed city passenger agent at Nelson, B.C., succeeding J. S. Carter, recently appointed General Agent, Passenger Department, Spokane, Wash.

R. C. Barker, heretofore train dispatcher, has been appointed Chief Dispatcher, district 2, Pacific Division, succeeding A. E. Stevens, promoted. Office, Vancouver, B.C.

G. M. Jackson has been appointed travelling passenger agent at Spokane, Wash., succeeding F. A. Valentine, resigned.

Department of Railways and Canals.—G. P. Graham, Brockville, Ont., has been sworn a member of the Privy Council of Canada, and appointed Minister of Railways and Canals, succeeding Hon. H. R. Emmerson, resigned.

Detroit Traffic Bureau.—W. P. Fitzsimmons of the Lackawanna-Grand Trunk Fast Freight Line, has been appointed Commissioner of the Detroit Traffic Bureau of Detroit, Mich.

Duluth, South Shore and Atlantic Rd.—S. R. Lewis, heretofore Chief Clerk in the General Freight Office, Marquette, Mich., has been appointed Assistant General Freight Agent of the D., S.S. and A. Ry., and of the Mineral Range Rd. Office, Duluth, Minn.

Grand Trunk Pacific Ry.—J. W. Loud, Freight Traffic Manager G.T.R. and Central Vermont Ry., has also been appointed Freight Traffic Manager, G.T. Pacific Ry.

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WM. PHILLIPS, GENERAL PASSENGER AGENT, TORONTO

G. W. Caye, heretofore Chief Clerk to the Vice-President and General Manager, at Montreal, has been appointed Assistant to the Vice-President and General Manager. He will also act as Purchasing Agent. Office, Winnipeg, Man.

Grand Trunk Ry.—G. Martin, heretofore accountant G.T.R. and Wabash Rd. at St. Thomas, is reported to have been appointed auditor of expenditures G.T.R. Office, Montreal.

D. McCooe, formerly General Roadmaster, Eastern Division, who resigned to enter the Great Northern Ry. (U.S.) service, has been re-appointed General Roadmaster, in place of G. Beckingham, acting General Roadmaster, assigned to other duties. Office, Montreal.

H. Paton, locomotive engineer, Stratford, Ont., has been appointed instructor and examiner on engines for the Middle Division. His duty will be to instruct firemen seeking promotion in their duties, and to prepare them for the examinations. This is a new position, and is in the nature of an experiment.

Great Northern Ry., U.S.—S. A. Walker, heretofore Assistant Superintendent Montana Division, has been appointed Superintendent, succeeding J. McNaught, resigned. Office, Havre, Mont.

F. E. Gerrish has been appointed Assistant Superintendent, succeeding S. A. Walker.

F. S. Elliott, heretofore Assistant Superintendent Kalispell Division, has been appointed Assistant Superintendent Spokane Division, succeeding W. Willerton, resigned. Office, Spokane, Wash.

W. R. Smith, heretofore Assistant Superintendent Spokane Falls and Northern Ry., has been appointed Assistant Superintendent Kalispell Division, G.N.R., succeeding F. S. Elliott. Office, Whitefish, Mont.

J. M. Doyle has been appointed Assistant Superintendent Spokane Falls and Northern Ry., succeeding W. R. Smith. Office, Spokane Wash.

Manitoba Department of Railways.—P. L. Leach, Winnipeg, has been appointed Secretary in the Department of Railways, Telephones and Telegraphs by the Manitoba Government.

Michigan Central Rd.—G. J. Duffy, Master Mechanic Canadian Division, St. Thomas, Ont., has resigned.

Mineral Range Rd.—See Duluth, South Shore and Atlantic Rd.

Pere Marquette Rd.—J. F. Deimhing has been appointed Chief Engineer, succeeding E. K. Woodward, resigned. Office, Detroit, Mich.

White Pass and Yukon Route.—J. H. Rogers, heretofore Traffic Manager, has resigned to take a similar position on the Tanana Ry., Alaska. There will be no appointment of a successor for the time being.

C.P.R. Betterments, Construction, Etc.

Georgian Bay and Seaboard Ry.—An inspection of the route of the proposed line from Victoria Harbor to near Peterborough was recently made by Sir Thos. G. Shaughnessy.

Guelph and Goderich Ry.—The official celebration in connection with the opening of the Guelph and Goderich Ry. took place at Goderich, Ont., Sept. 12. The line is an extension of the Guelph Junction Ry., and was opened for passenger traffic Aug. 26. It has a total length of 80 miles, and was opened from Guelph to Elmira in Aug., 1906; and subsequently to Milverton and Blyth, but owing to the heavy works which had to be undertaken at Goderich, the opening of the last few miles from Blyth was delayed until Aug. 26. The first meeting called to secure a C.P.R. connection for Goderich was held at Brussels, Dec. 16, 1884, the idea then being to secure a line to Elora.

The branch from Linwood to Listowel is being proceeded with, and the grading is reported practically completed. Tracklaying was expected to be well in hand by the end of Sept.

Fort William Terminals.—Several conferences have recently been held at Fort William, Ont., between C.P.R. officials and representatives of the City Council, with respect to the company's terminals there. The C.P.R. has under consideration extensive plans for the reconstruction of its terminal accommodation there. According to press reports the plans do not take into consideration a single portion of the terminals now in use. The new work involves the construction of a coal dock with a capacity of 1,000,000 tons; freight sheds with over 6,000 ft. of frontage; the entire rearrangement of the yards without regard to the present sheds, a large cleaning elevator, and other buildings on an extensive scale. It is also stated that the rearrangement of the yards, etc., may involve the transfer of the package freight business to Port Arthur. The result of the recent conference will be discussed at an early meeting of the City Council.

Fort William-Winnipeg Second Track.—G. J. Bury, Assistant General Manager Western Lines, has completed an inspection of the second track work in progress between Fort William, Ont., and Winnipeg. It is estimated that between 250 and 300 miles of the second track work will be completed by the end of this season, and that the remainder will be completed by June, 1908.

Winnipeg Station Building.—The construction of the roof on the train shed at Winnipeg station was started Aug. 21.

Bridge at Brandon.—An arrangement is reported to have been completed between the C.P.R. and the Brandon, Man., City Council, whereby the company agrees to pay its share of the new bridge to be built at First St. The bridge will probably be constructed of steel upon reinforced concrete abutments. The work of removing the old bridge is to be begun at once.

Bienfait Collieries.—W. Whyte, Second Vice-President, returned to Winnipeg, Aug. 29, from an inspection of the coal mines in the Bienfait, Sask., district. They are at present turning out about 500 tons of coal a day, but it is expected that the output will be increased to 2,000 or 2,500 tons a day in the near future. The Souris Coal Co., which leases from the C.P.R., has installed four electric coal crushers to handle the output.

Manitoba and Northwestern Ry.—A. Price, General Superintendent Central Division, was in Saskatoon, Sask., Aug. 29, inspecting the work in progress there, which includes a depot, yards and a bridge to connect the section of the line from Sheho, now nearly completed, with the line already constructed westerly, which is in operation as far as Asquith, Sask. The works are all reported to be well forward. The line will be used to carry grain this fall, but Mr. Price would not give a definite promise respecting a date for the inauguration of passenger traffic.

Pheasant Hills Branch.—H. A. K. Drury, of the Railway Commission's staff, has completed an inspection of the extension of the Pheasant Hills branch from Strassburg to Nokomis, Sask., 31 miles, prior to the inauguration of a freight and passenger service. The extension of the line to Lanigan, a further distance of 10 miles, where a junction is being effected with the Manitoba and Northwestern line into Saskatoon, is being completed.

Weyburn to Lethbridge.—The Souris branch has been completed to Weyburn, Sask., and local press reports state that it is intended to extend the branch to Lethbridge, Alta., and that surveys have been completed for the line as far as the Dirt Hills Gap. This would give practically an air line and would save considerably in distance of haul and gradient between Winnipeg and Lethbridge over the present line.

Belly River Bridge.—The contractor's plant for the work of putting in the piers of the new bridge across the Belly River at Lethbridge arrived early in Sept., and the preliminary operations are in progress. The work will be prosecuted as far as possible during the winter. John Gunn & Sons, Winnipeg, have the contract.

Hector-Field Grade Revision.—Press reports state that a contract has been let for the work of reducing the grades between Hector and Field, B.C., as described on pg. 653 of our Sept. issue, to Macdonell, Gzowski Co., Vancouver, B.C.; that the amount involved is $1,500,000, and that the time for the completion of the work is 18 months. The present main line between Hector and Field is eight miles in length and the difference in altitude is 1,143 ft., Hector's elevation being 5,207 ft., and Field's 4,064 ft. Between these points the controlling gradient is 4.5%, which has necessitated the use of two, three and four locomotives to take a passenger train over. By the new route the gradient will be cut in half, but the distance will be increased to about 12 miles. The most interesting feature of the new line will be the tunnel work. Two tunnels, one on each side of the Kicking Horse River, will be driven through the solid rock, and carry a gradient through their entire length.

Kamloops to Edmonton.—For some time past articles have appeared in daily and other papers to the effect that the C.P.R had issued instructions for the survey of a line of railway to connect Edmonton, Alta., and Kamloops, B.C., the company having secured the charter of a company covering the territory. We are advised that the C.P.R. has not given any such instructions, and that it is not expected that any survey will be ordered. The company by its charter has authority to construct such a branch line as the suggested one would be.

Kootenay Central Ry.—Nothing has been definitely decided with reference to the project for the taking over of the charter of this railway by the C.P.R. The line would extend from Golden, B.C., on the main transcontinental line to a point on the company's Crow's Nest Pass line, about 175 miles. W. Whyte, Second Vice-President, recently went over the projected route, and has reported to the directors. Sir Thos. G. Shaughnessy is reported to have said that the owners of the charter would be able to make some arrangements for the construction of the line in the near future.

Vancouver Island Betterments.—R. Marpole, General Executive Assistant C.P.R., and Vice-President Esquimalt and Nanaimo Ry., in a recent interview said: "New Alberni will be the new terminus of the line: it will be necessary to go there in order to have sufficiently deep water for ocean liners to come to the wharves. We shall pass through old Alberni, but New Alberni will be the terminus." The company also proposes to extend its line to Comox, and will apply to the B.C. Government for a subsidy at the next session of the Legislature.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—A regular service has been opened on the new line between Bismarck and Minot, N.D. An amendment to the company's charter has been filed in Wisconsin, permitting it to construct a branch from Brooton, north-west to Superior, Minn., 180 miles. (Sept., pg. 659).

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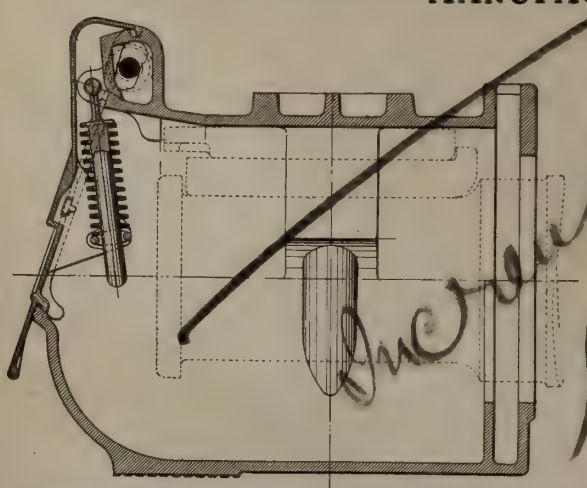

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C.P.R. ANNUAL REPORT.

Following is the 26th annual report, addressed to the shareholders over the signature of the President, Sir Thos. G. Shaughnessy:

The accounts for the year ended June 30, 1907, show the following results:

Gross earnings		$72,217,527 64
Working expenses		46,914,218 83
Net earnings		$25,303,308 81
Net earnings of steamships in excess of amount included in monthly reports		723,648 56
Interest on deposits and loans	$836.034 70	
Interest from Minneapolis, St. Paul & Sault Ste. Marie Ry. on bonds held by the Co.	159,720 00	
Interest from Mineral Range Railroad Co. on bonds held by the Co.	50,160 00	
Interest from Montreal & Atlantic Ry. and on other bonds held by the Co	54,915 00	
Dividends on Minneapolis, St. Paul & Sault Ste. Marie Ry. preferred and ordinary stocks held by the Co	530,002 00	
Dividend on St. John Bridge & Ry. Extension Co. stock	10,000 00	
		1,640,831 70
		$27,667,789 70
Deduct fixed charges		8,511,755 56
Surplus		$19,156,033 51
Deduct amount transferred to steamship replacement fund	$700,000 00	
Contribution to pension fund	80,000 00	
		780,000 00
From this there has been charged a ½-yearly dividend on preference stock of 2%, paid April 1, 1907	$ 857,494 88	
And a ½-yearly dividend on ordinary stock of 3%, paid April 1, 1907	3,650,400 00	
		4,507,894 88
		$13,868,138 63
From this there has been declared a second ½-yearly dividend on preference stock of 2%, payable Oct. 1, 1907	$878,733 31	
And a second ½-yearly dividend on ordinary stock of 3%, payable Oct 1, 1907	3,650,400 00	
		4,529,133 31
Leaving net surplus for the year		$ 9,339,005 32

In addition to the above dividends on ordinary stock, 1% was declared from interest on land funds.

The working expenses for the year were 64.96% of the gross earnings, and the net earnings 35.04%, compared with 62.75 and 37.25% respectively in 1906. Four per cent. consolidated debenture stock to the amount of £930,000 was created and sold and the proceeds were applied towards the construction of various branch lines, and the acquisition of mortgage bonds the interest on which had been guaranteed by the company. Preference stock to the amount of £250,000 was created and sold for the purpose of meeting expenditures sanctioned. The Minneapolis, St. Paul & Sault Ste. Marie Ry. Co., to meet the cost of constructing 175 additional miles of railway, issued and sold 4% consolidated mortgage bonds to the amount of $3,500,000, on which the company's guarantee of interest was endorsed. The land sales were 994,840 acres, which realized $5,887,377, an average of $5.92 an acre. Included in these sales there is a large area for which contracts had been previously made at $4 to $5 an acre. The average price realized from lands actually sold within the year was $8.09 an acre.

The Directors have made an agreement with the Northern Colonization Ry. Co. to construct an extension of that company's railway from Nomingue to Rapide de l'Original, Que., about 34 miles, the extension when constructed to be taken over at a rental equivalent to 4% per annum on the bonds of the Northern Colonization Ry. Co., which may be issued, not exceeding in amount $20,000 a mile of railway, as provided for in the lease of that railway already approved.

An agreement has been made with the St. Mary's and Western Ontario Ry. Co. for the lease, on its completion, of that company's line from St. Mary's, Ont., to a connection, at or near Embro, with the proposed extension of the Tillsonburg, Lake Erie and Pacific Ry., leased to the company, a distance of about 15¼ miles. The rental to be paid is 40% of the gross earnings, but not less than $7,930 a year, which represents the interest at 4% per annum on $198,250 first mortgage bonds of the St. Mary's and Western Ontario Ry., to be issued by that company, and being at the rate of $13,000 per mile of its railway; the C.P.R. Co. having the option of acquiring the whole of the capital stock of that company at any time within twelve years on payment of the sum of $25,000. The agreement will be submitted for approval.

In 1904 you authorized the Directors to proceed with the construction of a railway from the vicinity of Sudbury to Kleinburg, on the Ontario Division, in order to provide a route entirely under this company's control between Toronto and the main line, and to meet the cost the Directors were empowered to issue and dispose of consolidated debenture stock to such an amount as they might deem expedient, but not exceeding in the aggregate $30,000 per mile of railway. Owing to the difficult character of the country and the increased cost of labor and material, the expense involved in the construction of this line exceeded the original estimate, and, therefore, shareholders will be asked to authorize the issue and sale of such further amount of 4% consolidated debenture stock as may be deemed necessary to complete the work, but not exceeding $10,000 per mile of the 226 miles under construction. Two steamers are being constructed, at a cost of $900,000, to supplement the fleet plying between Georgian Bay ports and the head of Lake Superior, and it is desirable that another high-class steamship should be provided as soon as possible for the route between Vancouver, Victoria and Seattle, of which the approximate cost will be $600,000. A resolution authorizing the issue and sale of securities to meet these expenditures will be submitted for approval. The subsidy that is now being paid to this company for the carriage of the mails between Liverpool and Hong Kong will expire in April, 1908, and it is not improbable that a faster and more frequent service will be made a condition of its continuance. In view of this fact the directors recommend that they be authorized to arrange for the acquisition or construction of two steamships to meet the requirements of your Pacific trade, or to build two larger and faster boats for the Atlantic service and transfer the Empress of Britain and Empress of Ireland to the route between Vancouver and Hong Kong.

Authority has already been given for the construction of a branch line from Moose Jaw, on the main line in Saskatchewan, northwesterly for 50 miles, but it is not unlikely that in the near future circumstances will make it desirable that this branch should be continued 100 further, and another branch should be constructed from Regina, on the main line in Saskatchewan, to a point in the vicinity of Saskatoon, a distance of about 165 miles. The shareholders will be asked to authorize the directors to proceed with these works whenever they deem it advisable to do so, and to sanction the issue of the requisite 4% consolidated debenture stock to meet the expenditure.

Notwithstanding the scarcity of labor, fair progress was made during the year with most of the works in hand. West of Lake Superior where the company was building 747 miles of railway, two-thirds of the grading has been completed, 270 miles of track laid and the rails and fastenings for the remaining mileage are on hand. It is confidently expected that approximately 200 miles of the double track between Winnipeg and Fort William will be available for use this autumn, and that the whole work will be completed in 1908. In Eastern Canada the line from Guelph to Goderich (80 miles) is practically completed. Twenty miles of grading has been done on the Walkerton and Lucknow Ry. out of a total of 38 miles, and sufficient progress had been made with the line between Kleinburg and Sudbury (226 miles) to ensure its availability for freight traffic before winter sets in. Of the second track that is being laid between Ste. Anne's and Smith's Falls, a distance of 108 miles, it is expected that 50 miles will be ready for use in 1907, and the balance in the following year. Portions of the new lines when completed were turned over to the operating department, and are included in the mileage covered by the traffic returns for the year. By-law 92 increasing the membership of the executive committee from five to six will be submitted for your approval. The following directors retire from office and are eligible for re-election: E. B. Osler, R. B. Angus, Sir Wm. C. Van Horne, Hon. L. J. Forget.

CONDENSED BALANCE SHEET.

Railway and equipment		$253,711,217 76
Ocean, lake and river steamships	$18,684,920 13	
Less amount applied in reduction of cost	2,268,224 69	
		16,416,695 44
Acquired securities (cost)		53,457,913 57
Properties held in trust for the company		3,414,259 08
Deferred payments on land and townsite sales		15,854,612 77
Advances: to Duluth, South Shore & Atlantic Ry., car trusts, etc.		236,213 19
Advances to lines under construction		6,702,045 65
Material and supplies on hand		9,425,612 88
Station and traffic balances, accounts receivable and advances		8,461,998 75
Imperial and Dominion Governments: Accounts due for mail transportation		263,760 93
Cash in hand		21,394,951 93
		$389,339,281 95

NOTE.—In addition to above assets, the company owns 8,905,823 acres of land in Manitoba, Saskatchewan and Alberta (average sales past year $5.92 per acre) and 3,419,673 acres in British Columbia.

Capital stock		$121,680,000 00
4% preference stock		43,936,665 70
4% consolidated debenture stock		106,045,411 21
Mortgage bonds—		
First mortgage bonds, 5%	$34,998,633 33	
Canada Central Ry., 6%	973,333 33	
Algoma branch, 1st mortgage	3,650,000 00	
North Shore Ry., 1st mortgage	616,119 67	
		40,238,086 33
Current accounts, pay rolls and traffic balances		14,355,682 16
Interest on funded debt and rental of leased lines: Coupons due July 1, 1907, and including coupons overdue, not presented	$1,196,034 05	
Accrued to date, not due	190,110 60	
		1,386,144 65
Equipment obligations		2,240,036 67
Equipment replacement fund		1,131,360 64
Steamship replacement fund		1,540,666 67
Appropriation for additions and improvements		4,323,652 29
Land grant—		
Sales of land and town sites		21,748,422 45
Surplus		30,713,153 18
		$389,339,281 95

FIXED CHARGES FOR YEAR ENDED JUNE 30, 1907.

1st mortgage bonds 5% due July 1, 1915	$ 1,749,931 66
Canada Central Ry. 2nd mortgage 6% bonds due Nov. 1, 1910	58,400 00
St. Lawrence & Ottawa Ry. 4% 1st mortgage bonds due June 15, 1910	38,933 34
Man. Southwestern Colonization Ry. 1st mortgage 5% bonds due June 1, 1934	127,200 00
Toronto, Grey & Bruce Ry. rental	140,000 00
Ontario & Quebec Ry. debenture stock, 5%	975,129 56
Ontario & Quebec Ry. (ordinary stock) 6%	120,000 00
	$3,209,594 56

(Continued on page 755.)

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Kerr Engine Co. Ltd., Walkerville, Ont	776
Latrobe Steel & Coupler Co., Philadelphia, Pa.	776
Lewis, Rice & Sons, Toronto	764
Leonard, E. & Sons, London, Ont	—
Locomotive and Machine Co. of Montreal, Ltd.	718
Mail Job Printing Co., Ltd., Toronto	788
Males, The, Co., New York City	790
McCaskill, Dougall & Co., Montreal.....Cover 1	
McClintock Mfg. Co., St. Paul, Minn	756
McConway & Torley Co., Pittsburgh, Pa	730
McCord & Co., Chicago, Ill	750
McGregor-Banwell Fence Co., Ltd., Walkerville.	770
McDougall John, Caledonian Iron W'ks Co., Ltd.	780
McKenzie, The M. Co., Ltd., Montreal	790
Mechanical Mfg. Co., Chicago, Ill	790
Metcalf, John S., Co., Chicago, Ill	774
Midland Towing & Wrecking Co., Ltd., Midland, Ont	790
Miller Bros. & Toms, Montreal	782
Modoc Soap Co., Philadelphia, Pa	790
Montreal Steel Works, Ltd., Montreal	748
Mussens Limited, Montreal.....Cover 1	
National Malleable Castings Co., Cleveland, O.Cover 1	
New Hotel Brevoort, Chicago. Ill	756
Norton, A. O., Coaticook, Que	726
O'Connor, J. J., Port Arthur, Ont	790
Ontario Wind Engine and Pump Co., Toronto.	782
Orford Copper Co., New York	724
Owen Sound Wire Fence Co., Ltd., Owen Sound.	787
Page Wire Fence Co., Ltd., Walkerville, Ont	768
Pere Marquette Rd	788
Peter Smith Heater Co., Detroit, Mich	762
Phillips, Eugene F., Electrical Works, Ltd.	788
Piper, The Hiram L., Co., Ltd., Montreal	790
Piper, N. L., Railway Supply Co., Ltd., Toronto.	754
Polson Iron Works, Ltd., Toronto	734
Porter, H. K., Co., Pittsburgh, Pa	732
Positive Lock Washer Co., Newark, N.J.	787
Prowse, G. R., Montreal	—
Pyke, J. W., & Co., Montreal	750
Pyle National Electric Headlight Co., Chicago. Cover 2	
Rail Joint Co., of Canada, Ltd., Montreal	726
Railway Materials Co, New York City	785
Rhodes, Curry & Co., Ltd., Amherst, N.S.	740
Robb Engineering Co., Ltd., Amherst, N.S.	738
St. Thomas Brass Co., Ltd., St. Thomas, Ont.	766
Safety Car Heating & Lighting Co., New York.	724
Sheriffs Mfg. Co., Milwaukee, Wis	784
Simplex Railway Appliance Co., Ltd.....Cover 4	
Smart, James, Mfg. Co., Ltd., Brockville, Ont.	—
Soule Raw Hide Lined Dust Guard Co	764
Standard Car Truck Co., Chicago, Ill	756
Standard Coupler Co., New York City	780
Standard Explosives, Limited, Montreal	754
Standard Inspection Bureau, Ltd., Toronto	787
Standard Steel Works, Philadelphia, Pa	768
Steel Concrete Co., Ltd., Montreal	746
Stevens, F. B., Detroit, Mich	760
Submarine Signal Co., Boston, Mass.	772
Taylor, Homer, Montreal	778
Toronto Bolt and Forging Co., Ltd., Toronto	770
Toronto Pressed Steel Co., Ltd., Toronto	772
United Typewriter Co., Ltd., Toronto	774
Valentine & Sons Publishing Co., Montreal	—
Vulcan Iron Works Co., Toledo, Ohio	74
Vulcan Iron Works, Wilkes-Barre, Pa	786
Washburn Steel Castings & Coupler Co., The.	790
Wire & Cable Co., Montreal	752
Wolfe Brush Co., Pittsburg, Pa	778
Wood, G. S., Chicago, Ill	778
Woodman, R., Mfg. and Supply Co., Boston, Mass.	780

W. T. RODDEN, Managing Director J. F. JOHNSON, Secretary-Treasurer
GEO. C. TUNSTALL, Jr., Sales Manager

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LIMITED

MANUFACTURERS OF

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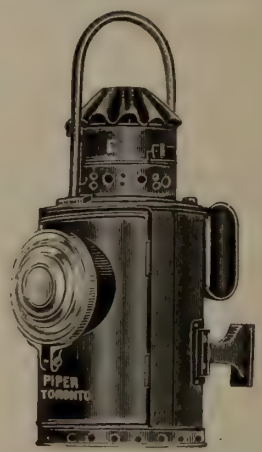
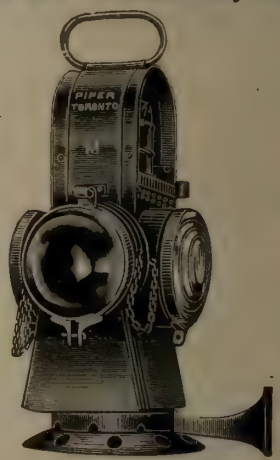


(Registered 1902) ENGINE TRI-COLOR LAMP



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GRAND TRUNK RAILWAY SYSTEM

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THROUGH TRAINS between BOSTON [via Boston & Main R.R. and Cent. Vermont Ry.] MONTREAL, TORONTO and CHICAGO.
THROUGH TRAINS between NEW YORK, TORONTO and CHICAGO via Lehigh Valley R.R. and Niagara Falls.
Dining, Cafe-Parlor, and Library Cars on Day Trains. Pullman Vestibuled Sleeping Cars on Night Trains.

THE "INTERNATIONAL LIMITED"

The "Railway Greyhound of Canada," the finest and fastest train in the Dominion, runs every day in the year between Montreal and Chicago.

The Lines of this Great System reach all the Principal Cities and Towns in Quebec and Ontario.

W. E. DAVIS, Passenger Traffic Manager, MONTREAL. G. T. BELL, General Passenger and Ticket Agent, MONTREAL, QUE.

C.P.R. ANNUAL REPORT.

(*Continued from page 751*)

Brought forward		$ 3,209,594 56
Atlantic & North-West Ry. 1st mortgage bonds (less Government proportion) due Jan. 1, 1937		136,333 34
Algoma Branch 5% 1st mortgage bonds due July 1, 1937		182,500 00
Rental, Calgary & Edmonton Ry		138,357 60
" Farnham to Brigham Jct.		1,400 00
" Mattawamkeag to Vanceboro		23,800 00
" New Brunswick Ry. System.		372,829 74
" Terminals at Toronto		29,759 74
" Terminals at Hamilton		33,862 76
" Hamilton Jct. to Toronto		42,028 66
" St. Stephen and Milltown Ry		2,050 00
" Lindsay, Bobcaygeon & Pontypool Ry		4,189 13
" Lachine Canal branch		851 40
Interest on Montreal & Western Ry. purchase		18,278 72
Interest on equipment leases		140,503 48

4% CONSOLIDATED DEBENTURE STOCK.

Interest from July 1, 1906	$4,144,483 10	
Interest from Jan. 1, 1907	38,933 33	
	$4,183,416 43	
Less received from subsidy Northern Colonization Ry.	8,000 00	
		$4,175,416 43
		$ 8,511,755 56

RECEIPTS AND EXPENDITURES.

Cash in hand June 30, 1906		$17,752,415 70
Receipts—		
Surplus revenue as per statement		18,376,033 51
Land department—		
Lands and townsites		
Net proceeds of sales	$7,788,125 03	
Less amounts remaining in deferred payments	4,304,414 63	
	$3,483,710 40	
Collection of deferred payments on previous years' sales	4,832,625 03	
		8,316,335 43
Subscription to $20,280,000 additional ordinary stock—		
Payments of remaining instalments and premium on unsubscribed stock sold		15,804,301 10
4% preference stock—		
Amount realized from issue of £250,000		1,222,715 37
Consolidated debenture stock—		
Amount realized from issue of £930,000		4,850,250 73
		$66,322,051 84
Deduct increase in accounts receivable—		
Station and traffic balances and advances	$8,461,998 75	
Due from Imperial and Dominion Governments	263,760 93	
Advances to new lines under construction	6,702,045 65	
	$15,427,805 33	
Less amounts at June 30, 1906	5,335,120 64	
		10,092,684 69
		$56,229,367 15

EXPENDITURES.

Dividends on preference stock—		
2% paid Oct. 1, 1906	$854 400 00	
2% paid April 1, 1907	857,494 88	
		$1,711,894 88
Dividends on ordinary stock—		
3% paid Oct. 1, 1906	$3,042,000 00	
3½% paid April 1, 1907	4,258,800 00	
		7,300,800 00
Properties held in trust for the company		762,723 82
Construction of acquired and branch lines		4,484,974 12
Additions and improvements, main line and branches		9,518,979 63
Additions and improvements, leased and acquired lines		1,562,905 92
Rolling stock, shops and machinery		13,477,994 99
Ocean, lake and river steamships—		
Fitting Atlantic steamships for passenger service	$ 37,581 46	
Additional steamships and appurtenances for Pacific coast service	$161,920 80	
Less sale of steamships Princess Louise and Yosemite	9,000 00	
	152,920 80	
Additional river steamers and barges	100,143 85	
Payments on account two new lake steamers	247,964 31	
Payments balance account new Atlantic steamships and purchase of tug Cruizer	168,945 80	
		707,556 22
Brought forward		$ 707,556 22
Final payment to Dominion Government account land grant bonds		1,500,000 00
Securities acquired—		
Kingston & Pembroke Ry., ordinary stock	400 00	
Canada Central Ry. 6% 2nd mortgage bonds, £10,000	48 666 67	
Atlantic & Northwest Ry. 5% 1st mortgage bonds, £4,000	19,466 66	
C. P. R. 5% 1st mortgage bonds, £16,000	77,866 67	
Calgary & Edmonton Ry. 4% 1st mortgage bonds	960,000 00	
	$1,106,400 00	
Less received from Canada North-West Land Co. on 5,625 shares ordinary stock	70,312 50	
		1,036,087 50
Increase in material and supplies on hand		386,793 25
		$42,450,710 33
Deduct increase in current liabilities		7,616,295 11
		$34,834,415 22
Cash in hand		21,394,951 93
		$56 229,367 15

CONSTRUCTION—ACQUIRED AND BRANCH LINES

Lachine canal branch	$125,027 31	
Lauder branch	77,694 99	
Darlingford branch	152 50	
Wolseley—Reston extension	582,597 05	
Stonewall branch—Teulon extension	34,023 79	
Moose Jaw branch	103,120 69	
Surveys projected lines	118,411 48	
	$1 041,027 81	
Toronto-Sudbury line	3 443,946 31	
	$4,484 974 12	

DETAILS OF EXPENDITURE ON ADDITIONS AND IMPROVEMENTS FROM JULY 1, 1906, TO JUNE 30, 1907.

QUEBEC TO BONFIELD:		
Additional sidings, buildings, stations and yards	$ 37,272 80	
Permanent bridges and improvements of line	45,742 77	
Wharves, docks and warehouses	2,264 95	
		$ 85,280 52
MONTREAL TERMINALS		1,480,284 22
BONFIELD TO PORT ARTHUR:		
Additional sidings, buildings, stations and yards	$ 234,042 69	
Permanent bridges and improvements of line	125,165 20	
		359,207 89
PORT ARTHUR TO LAGGAN:		
Additional sidings, buildings, stations and yards	$731,581 59	
Permanent bridges and improvements of line	713,074 81	
Winnipeg hotel and station	346,155 84	
Winnipeg shops	50,413 30	
Winnipeg terminals	102,072 60	
Wharves, docks and warehouses	54,974 53	
Double track	3,548,229 56	
Right of way	803 75	
		5,547,305 98
LAGGAN TO VANCOUVER:		
Additional sidings, buildings, stations and yards	$ 132,403 42	
Permanent bridges and improvements of line	387,813 99	
Wharves, docks and warehouses	28,470 63	
		548,688 04
VICTORIA HOTEL		275,920 52
Total main line carried forward		$8,296,687 17
BRANCH LINES:		
Southwestern branch	$ 7,076 25	
Stonewall branch	11,444 76	
Selkirk branch	24,299 78	
Emerson branch	31,274 60	
Nakusp and Slocan branch	8,826 13	
Revelstoke and Arrow lake branch	6 550 68	
Snowflake branch	126 79	
Waskada branch	449 25	
Buckingham branch	1,369 10	
St. Lin branch	236 18	
Lake Temiskaming branch	840 09	
McGregor branch	1,409 52	
" " Brookdale-Varcoe extension	4,224 59	
Arcola-Regina branch	60,983 72	
Pheasant Hills branch	4,770 90	
Mission branch	922 87	
SOURIS BRANCH:		
Additional sidings, buildings, stations and yards	150,998 54	
Permanent bridges and improvements of line	68,452 41	
	$ 384,255 17	
Brought forward	$ 384,255 17	
ALGOMA BRANCH:		
Additional sidings, buildings, stations and yards	18,048 83	
Permanent bridges and improvements of line	24,280 52	
CROW'S NEST PASS BRANCH		
Additional sidings, buildings, stations and yards	297,101 76	
Permanent bridges and improvements of line	183,526 96	
	480,628 72	
BRITISH COLUMBIA SOUTHERN RY.:		
Additional sidings, buildings, stations and yards	31,952 26	
Permanent bridges and improvements of line	126,112 28	
Balfour extension	1,429 45	
	$ 159,493 99	
Less: Amount realized from sale of property	205,000 00 Cr.	45,506 01
		861,717 13
Telegraph extensions and additions		198,743 15
Office building, London, England		2,840 03
Rented and temporary sidings		158,992 15
Total, main line and branches		$ 9 518,979 63

DETAILS OF EXPENDITURE ON LEASED AND ACQUIRED LINES, FROM JULY 1, 1906, TO JUNE 30, 1907.

ONTARIO AND QUEBEC RY:		
Additional sidings, buildings, stations and yards	$ 125,513 65	
Permanent bridges and improvements of line	438,330 16	
Right of way	2,122 67	
Double track, St. Anne's to Smith's Falls	465,162 43	
	$1,031,128 91	
Less credits	118,034 13	
		$ 913,094 78
ATLANTIC AND NORTH-WEST RY.:		
Additional sidings, buildings, stations and yards	$ 20,210 59	
Permanent bridges and improvements of line	88,978 88	
		109,189 47
MONTREAL AND WESTERN RY.:		
Additional sidings, buildings, stations and yards	$ 6,704 95	
Permanent bridges and improvements of line	8,932 34	
Account purchase of road	9,554 02	
		25,191 31
MANITOBA SOUTH WESTERN COLONIZATION RY.:		
Additional sidings, buildings, stations and yards	$ 11,407 76	
Permanent bridges and improvements of line	8,897 21	
Right of way	600 00	
		20,904 97
COLUMBIA AND KOOTENAY RY.:		
Additional sidings, buildings, stations and yards	$ 4,849 14	
Permanent bridges and improvements of line	7,960 03	
		12,809 17
MANITOBA AND NORTH-WESTERN RY.:		
Additional sidings, buildings, stations and yards	$ 19,707 09	
Permanent bridges and improvements of line	4,009 79	
		23,716 88
GREAT NORTH-WEST CENTRAL RY.:		
Additional sidings, buildings, stations and yards	$ 3,204 95	
Permanent bridges and improvements of line	808.80	
		4,013 75
NEW BRUNSWICK RY.:		
Additional sidings, buildings, stations and yards	$ 61 482 55	
Permanent bridges and improvement of lines	137,694 99	
Wharves, docks and warehouses	1,211 87	
		200.389 41
CALGARY AND EDMONTON RY.:		
Additional sidings, buildings, stations and yards	$ 39,668 47	
Permanent bridges and improvements of line	49,779 51	
		89,447 98
COLUMBIA AND WESTERN RY.:		
Additional sidings, buildings, stations and yards	$ 24,772 85	
Permanent bridges and improvements of line	124,438 72	
		149,211 57
MONTREAL AND OTTAWA RY.:		
Additional sidings, buildings, stations and yards	$ 1,687 39	
Permanent bridges and improvements of line	12,941 12	
		14 628 51
JOLIETTE AND BRANDON RY.:		308 12
		$1,562,905 92

McCLINTOCK MANUFACTURING CO.

Manufacturers of

AUTOMATIC BLOCK SIGNAL SYSTEM FOR STEAM & ELECTRIC RAILROADS
ELECTRICAL HIGHWAY CROSSING SIGNALS FOR ELECTRIC ROADS
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A. D. HANNAH & D. HOGG, PROPRIETORS.

ARTHUR M. GRANT, MANAGER.

THE BARBER TRUCK

IT GIVES THE BOLSTER LATERAL TRAVEL, GREATLY ELIMINATING THE LATERAL FORCES & SHOCKS

IT REDUCES
TRAIN RESISTANCE
WEAR ON WHEEL FLANGES
WEAR ON COUPLER KNUCKLES
WEAR ON JOURNAL BEARINGS

STANDARD CAR TRUCK CO.
Old Colony Bldg. — CHICAGO, ILL., U.S.A.

EARNINGS FOR YEAR ENDED JUNE 30.

Passengers	$ 19,528,878 09
Freight	45,885,968 16
Mails	722,937 02
Sleeping cars, express, elevators, telegraph and miscellaneous, including profit from ocean steamships	6,079,744 37
Total	$72,217,527 64

WORKING EXPENSES FOR YEAR ENDED JUNE 30.

Conducting transportation	$23,765,138 08
Maintenance of way and structures	10,110,957 49
Maintenance of equipment	9,083,248 61
Parlor and sleeping car expenses	318,823 80
Expenses of lake and river steamers	564,552 11
General expenses	2,188,857 87
Commercial telegraph	882,640 87
Total	$46,914,218 83

STATEMENT OF EQUIPMENT AT JUNE 30, 1907.

Locomotives	1,296
First and second-class passenger cars, baggage cars, and colonist sleeping cars	1,191
First-class sleeping, dining and café cars	224
Parlor cars, official and paymasters' cars	51
Freight and cattle cars (all kinds)	40,405
Conductors' vans	722
Board, tool and auxiliary cars and steam shovels	2,108

OCEAN, LAKE AND RIVER STEAMERS.

ATLANTIC SERVICE—Empress of Britain, Empress of Ireland, Lake Manitoba, Lake Champlain, Lake Michigan, Lake Erie, Mount Temple, Montcalm, Montfort, Montrose, Montreal, Milwaukee, Mount Royal, Montezuma, Monmouth, Cruizer.

PACIFIC SERVICE—Empress of India, Empress of Japan, Empress of China, Tartar, Athenian, Monteagle.

PACIFIC COAST SERVICE—Amur, Beaver, Charmer, Otter, Princess Beatrice, Transfer, Princess May, Princess Victoria, Queen City, R. P. Rithet, Tees.

UPPER LAKE SERVICE—Manitoba, Athabasca, Alberta.

BRITISH COLUMBIA LAKE AND RIVER SERVICE—Aberdeen, Kokanee, Minto, Moyie, Nelson, Rossland, Kuskanook, Columbia, Okanagan, Proctor, Sandon, Slocan, York, Victoria, Kootenay, Valhalla, Ymir.

FERRY SERVICE—Michigan, Ontario

DESCRIPTION OF FREIGHT FORWARDED.

	1905-6	1906-7
Flour, brls	5,994,535	6,256,702
Grain, bush	82,196,648	93,207,009
Live stock, head	1,428,320	1,537,467
Lumber, ft	1,804,648,962	1,989,444,728
Firewood, cords	264,456	274,629
Manufactured articles, tons	3,818,625	4,385,854
All other articles, tons	4,098,819	4,794,295

FREIGHT TRAFFIC.

	1905-6	1906-7
No. of tons carried	13,933,798	15,733,306
No. of tons carried one mile	5,342,248,625	5,946,779,961
Earnings per ton per mile	0.74 cts.	0.77 cts.

PASSENGER TRAFFIC.

	1905-6	1906-7
No. of passengers carried	7,753,323	8,779,620
No. of passengers carried one mile	870,339,686	1,064,564,999
Earnings per passenger per mile	1.84 cts.	1.83 cts.

TRAIN TRAFFIC STATISTICS.

TRAIN MILEAGE.

	1907.	1906.
Passenger trains	12,413,638	11,086,929
Freight "	18,187,263	17,186,583
Mixed "	1,411,870	1,413,152
Total trains	32,012,771	29,686,664

CAR MILEAGE.

PASSENGER—	1907.	1906.
Coaches and P.D. and S. cars	63,025,195	54,717,641
Combination cars	2,437,214	2,310,246
Baggage, mail and express cars	22,938,884	20,339,499
Total passenger cars	88,401,293	77,367,386
FREIGHT—	**1907.**	**1906.**
Loaded	347,181,189	316,199,077
Empty	83,131,642	93,808,254
Caboose	19,646,800	18,326,491
Total freight cars	449,959,631	428,333,822
Passenger cars per traffic train mile	6.39	6.19
Freight cars per traffic train mile	22.96	23.03

PASSENGER TRAFFIC.

	1907.	1906.
Passengers carried (earning revenue)	8,671,438	7,665,481
Passengers carried (earning revenue) one mile	1,052,286,316	859,011,930
Passengers carried (earning revenue) one mile per mile of road	117,330	99,032
Average journey per passenger ... miles	121.35	112.06
Average amount received per passenger. ... $	2.17	2.02
Average amount received per passenger mile, ... cts.	1.79	1.80
Average number of passengers per train mile	76.10	68.72
Average number of passengers per car mile	16.38	15.37
Revenue from passengers per passenger car mile ... cts.	29.35	27.66
Total passenger train earnings per train mile ... $	1.63	1.49
Total passenger train earnings per mile of road ... $	2,519.17	2,149.89

FREIGHT TRAFFIC.

Tons of revenue freight carried one mile	5,789,191,940	5,190,951,172
Tons non-revenue freight carried one mile	870,757,856	839,801,843
Total tons (all classes) freight carried one mile	6,659,949,796	6,030,753,015
Tons of revenue freight carried one mile per mile of road	645,532	597,306
Tons of non-revenue freight carried one mile per mile of road	97,095	96,657
Total tons (all classes) freight carried one mile per mile of road	742,627	693,963
Average amount received per ton per mile of revenue freight. cts.	0.776	0.743
Average no. of tons of revenue freight per train mile	295.38	279.10
Average no. of tons of non-rev. freight per train mile	44.46	45.15
Average no. of tons of (all classes) freight per train mile	339.84	324.25
Average no. of tons of revenue freight per loaded car mile	16.67	16.42
Average no. of tons of non-rev. freight per loaded car mile	2.51	2.66
Average no. of tons of (all classes) freight per loaded car mile	19.18	19.08
Freight train earnings per loaded car mile ... cts.	12.94	12.20
Freight train earnings per train mile ... $	2.29	2.07
Freight train earnings per mile of road ... $	5,009.18	4,440.24

STATEMENT OF PENSION DEPARTMENT TO JUNE 30, 1907.

Balance at June 30, 1906	$ 508,602 94
Amount contributed by Company for year	80,000 00
Amount received as interest	29,612 69
	$ 618,215 63
Payment of pension allowances for year	25,333 48
Balance in cash and investments	$ 592,882 15

NUMBER ON PENSION ROLL AT JUNE 30, 1907.

Under 60 years of age	16
Between 60 and 70 years of age	105
Over 70 years of age	82
Total	203

Too Late for Classification.

General.

It is announced that on and after Oct. 1 all dinners on C.P.R. dining cars throughout the system from the Atlantic to the Pacific will be served a la carte.

The Winnipeg City Council has accepted the tender of Buchanan & Co., for the erection of a Howe truss bridge over the river at Lac du Bonnet, on the route of its power transmission line, at an approximate cost of $44,127.

Railway Development.

Ottawa Terminal Ry.—The plans for the new central station at Ottawa were discussed at considerable length Sept. 12, at a meeting with a number of members of the Government. W. Wainwright, Fourth Vice-President, and W. H. Biggar, Chief Solicitor, represented the G.T.R., while D. McNicoll, Vice-President, and A. R. Creelman, Chief Counsel, represented the C.P.R. The Ministers expressed general approval of the plans, and it is expected that official approval will be given by order-in-council at an early date. There are certain matters as between the different companies to be adjusted.

Tests were made of the ground on the site of the new station building Sept. 12, with a view of arranging the foundation work. Rock was reached in most places at a depth of 2 ft.

Yonge St. Bridge, Toronto.—The Ontario Court of Appeal delivered judgment Sept. 17, dismissing the appeal of the C.P.R. and the G.T.R. against the original order of the Railway Committee of the Privy Council, and the decision subsequently given by Justice Anglin directing the companies to bear the whole expense of the construction of a bridge to carry Yonge St. over the railway tracks at the bay front, and to maintain the same when erected. The court held that the Railway Committee had ample power to deal with the matter, and that the courts had no right to interfere with its findings. The difficulty in the case arose from the fact that the Railway Act of 1903 did not contain any provision for the continuance of any business pending before the Railway Committee. The court also failed to find anything to sustain the argument of the railway companies that what was commonly called Yonge St. south of the north side of the Esplanade was not in reality a highway, and not part of Yonge St. proper.

The first order of the Railway Committee of the Privy Council was made Jan. 14, 1904, on the application of the city of Toronto. By it direction was given that the railway companies should, in the interests of the public safety, construct a bridge at the lower end of Yonge St. across the railway tracks; work to be begun before April 1, and to be completed on or before Aug. 1. To be valid this order had to be sanctioned by the Governor-in-Council, and this endorsation was not secured until Oct. 7, 1904, at which time the time of performance had already expired. A new period of time was, however, inserted, and this, it was then contended by the railway companies, was illegal, and in reality was the reviving of a dead order since, as they claimed, the Railway Committee's order expired when the time of performance had thus expired. Action was then brought before Justice Anglin to have a declaration made that the Railway Committee had exceeded its jurisdiction, and to obtain an injunction restraining the city of Toronto from taking any proceedings under the order mentioned. At this trial the Judge reserved decision to enable the city to make application to the Governor-General-in-Council for certain amendments to the orders, and, these having been made, judgment was given dismissing the action. It was then from this action that the appeal to the Court of Appeal was made, and which is now dismissed with costs.

Canada West Coal and Coke Co.—By supplementary letters patent under the Dominion Companies' Act the Canada West Coal and Coke Co. has been authorized to change its name to that of the Canada West Coal Co.

Railway Finance, Meetings, etc.

Vancouver, Victoria and Eastern Ry. and Navigation Co.—A meeting of the shareholders has been called to be held Oct. 15, for the purpose of approving an agreement for the purchase of that portion of the railway and undertaking of the Vancouver, Westminster and Yukon Ry. in the city of Vancouver; from Vancouver to New Westminster, in New Westminster, and all lines of railway connecting it with the bridge over the Fraser River at New Westminster; also for the purpose of approving an agreement for the purchase of the portion of the line of the Victoria Terminal Ry. and Ferry Co. known as the third section of the undertaking, and extending from near the mouth of the Fraser River easterly to a connection with the New Westminster Southern Ry.

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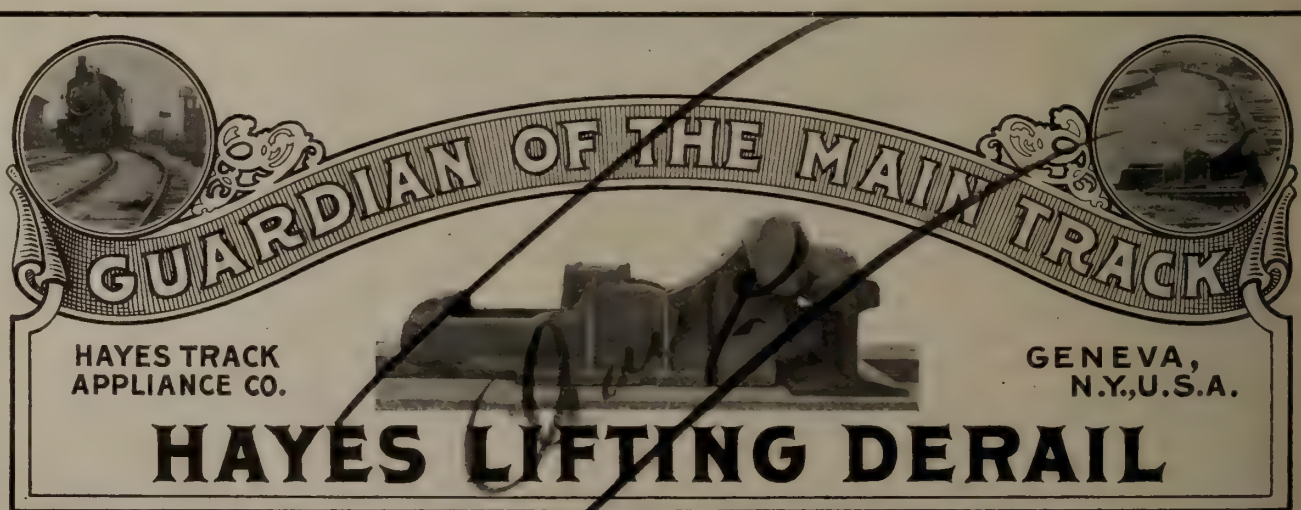

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at Cloverdale, and also the line extending from near Mud Bay southeasterly to the International boundary at Blaine, connecting there with the line of the Seattle and Montana Ry. The shareholders of the Vancouver, Westminster and Yukon Ry. have also been called to meet on the same day to sanction an agreement for the sale of its lines to the V.V. and E. Ry. and N. Co.

Canada Atlantic Ry.—The meeting of the Canada Atlantic Railway Co.'s shareholders, which was to have been held Sept. 24, was adjourned to Oct. 24. One of the purposes of the meeting is to vote on the question of amalgamating with the G.T.R. Co. Although the C.A.R. is controlled by the G.T.R., and is known as a division of the G.T.R. system, the C.A.R. Co. has still separate corporate existence, and the accounts are kept separate from the G.T.R. ones.

Temiscouata Ry.—Following are the officers and directors for the current year: President, Frank Grundy, Sherbrooke, Que. Vice-President, J. H. Walsh, Sherbrooke; other directors: W. Cook, K.C.; A. H. Cook, K.C.; A. Lawrie, W. N. Campbell, A. Steele; Secretary and General Manager, D. B. Lindsay; Superintendent, G. G. Grundy.

Atlantic and Pacific Ocean Marine.

A. J. Colston has been appointed liquidator of the Quebec Transport Co., Ltd

A Donaldson, senior partner of the firm of Donaldson Bros., owners of the Donaldson Line of steamships trading between Glasgow and Canada, died in Glasgow, Scotland, Sept. 17.

The Dominion Line S.S. Dominion, which arrived in Montreal Sept. 23, reported that during a severe storm one seaman was washed overboard and drowned and another was severely injured.

The Allan Line S.S. Grampian left Glasgow, Scotland, Sept. 22, for Montreal, on her maiden trip. Her recent trial trip was satisfactory, and it is confidently expected that she will make a record.

The Allan Line S.S. Bavarian, which was stranded on Wye Rock, in the St. Lawrence, in the fall of 1905 and raised last year, has, press reports state, been sold by the underwriters to the North American Wrecking Co. of New York, for $62,000.

The C.P.R. S.S. Empress of Britain, which left Liverpool 24 hours before the Lusitania, which latter vessel was on her maiden trip, landed her mails at Rimouski, Que., Sept. 12, 20 hours before the Lusitania's mails were landed at New York.

A Belfast-Ireland despatch states that A. M. Carlisle, manager of the Harland and Wolff Shipbuilding Yard there, has given details respecting a steamship which the company is designing for the International Mercantile Marine Co., to have a speed of 30 knots an hour.

The Union Steamship Co. of New Zealand, has placed an order with A. Stephen & Sons, Linthouse, Glasgow, Scotland, for a steamship for its New Zealand-Vancouver service. The vessel will have accommodation for 250 first-class, 160 second-class, and 100 third-class passengers, and will be fitted with reciprocating engines.

The C.P.R. has announced a reduction of passenger rates on its Atlantic Steamship Line from Montreal to Liverpool, bringing them a little below the usual winter rates. The new rates become effective at once, and though the rates from Liverpool to Montreal are not affected, it is expected that the same will come into force for westbound traffic Nov. 1.

Ottawa and Montreal press reports state that the Fairfield Shipbuilding Co have submitted designs for 26-knot steamers to the C.P.R., and that negotiations for the construction of two such vessels are in progress. It is also stated that there is a project on foot by which the C.P.R. and the Allan Steamship Co. will unite to provide a 26-knot passenger service on the Atlantic between Canada and Great Britain.

In connection with the announcement in the C.P.R. annual report on another page of this issue that the S.S. Empress of Britain and Empress of Ireland will in the near future be transferred from the Atlantic to the Pacific service, it is announced that the Co. will build two 22-knot vessels for the Atlantic trade so as to make the trip between Halifax, N.S., and Liverpool, Eng., in 4 days and 8 hours, and giving the quickest time between Europe and this continent.

Maritime Provinces and Newfoundland Marine.

A. H. Zwicker, of Lunenburg, N.S., has purchased the barque Strathern in the U.S.

Capt. J. D. Apt has been appointed wharfinger of the Dominion Government wharf at Port Wade, N.S.

Tenders are invited by the Dominion Public Works Department for the construction of a block and span wharf at Selma, N.S.

The damaged steamboat Micmac, which was wrecked recently off the Newfoundland coast, was offered for sale by public auction at St. John's, Nfld., Sept. 24.

Pontoons have been built at Halifax, N.S., to assist in the work of floating the S.S. Turret Bell, which went ashore at Prince Edward Island some time ago.

A press report states than an offer of $10,000,000 has been made for the Dominion Atlantic Ry. steamships fleet, on behalf of the New York, New Haven and Hartford Rd.

Ontario and Great Lakes.

The Midland Navigation Co. is reported to be negotiating for the construction of another large freight steamship, to be larger than the Midland Prince.

Capt. S. Crangle, of the St. Lawrence and Chicago Steam Navigation Co., who went to Great Britain in connection with the building of the company's steamship G. R. Crowe, and who was ill while there, returned to Toronto Sept. 22, much improved in health.

Press reports state that a deputation from the Boards of Trade of Montreal and Toronto will be sent to the Dominion Government to request that the St. Lawrence canals be deepened and widened so as to allow the passage of large ocean-going vessels right up to ports on the Great Lakes.

Manitoba, Saskatchewan, Alberta, Etc.

Capt. G. F. Fortney, of the steamboat Alexandra, was married to Miss C. Quail, Sept. 12. The ceremony took place on the barge Togo, which had been moored in the river about 2 miles beyond Norwood bridge, Winnipeg.

The Winnipeg Board of Control has decided to purchase, subject to inspection, the tug Queen from the Rat Portage Lumber Co., for $2,000. The tug is required in connection with the construction of the corporation power transmission plant at Point du Boise.

B.C. and Pacific Coast Marine.

The steamboat Iroquois on the route between Vancouver, B.C., and Seattle, Wash., is being equipped for wireless telegraphy.

A contract for building two scows has been awarded by the Dominion Public Works Department to W. Turpel & Son, Victoria, B.C.

The Northern British Columbia Transportation Co.'s stern-wheel steamboat Northwest, running on the Skeena River, struck a rock about 40 miles from Hazleton, B.C., and went to pieces. This, with the recent loss of the Mount Royal and the accident to the Hazleton, which was badly damaged, has completely suspended traffic on the river.

ELECTRIC RAILWAYS

Projects, Construction and Betterments.

British Columbia Electric Ry.—The first sod of the electric line between New Westminster and Chilliwack was turned Aug 26. When completed it will be 62 miles long and is estimated to cost $2,500,000. Construction will take about two years. (Sept., pg. 683).

A press report states that within the next five years a scheme will be completed by which a fast electric service between Vancouver, B.C., and Seattle, Wash., will be assured. It is stated that the holders of the controlling interests in electric railways, now at Everett, Wash., have decided to extend to Bellingham, and later on to Blaine, and that the B.C.E.R. Co. will construct a line to meet them, and make an arrangement for the interchange of cars and running rights.

Chatham, Wallaceburg and Lake Erie Ry.—A committee of Petrolea business men has been appointed to confer with the company as to the right-of-way, and other points regarding the proposed extension of line between Wallaceburg and Petrolea.

Cobalt-Larder Lake.—A project to construct an electric railway from Cobalt to Haileybury, New Liskeard, Tomstown and Larder Lake is being discussed at Haileybury. A survey between Cobalt and Haileybury is in progress.

Grand Valley Ry.—The plans for the extension of the line from Brantford to Port Dover show that the route to be taken is from Brantford on the west side of Mount Pleasant Road through that village to Boston, thence south to Townsend Center, on to Waterford and through Simcoe to Port Dover. There will be two grade crossings, one at Brantford over the Toronto, Hamilton and Buffalo Ry., and the other at Simcoe, over the Brantford and Port Dover line. At a short distance over the first crossing the track will enter private grounds, and the roadway is not to be used again for the entire route. A subway will be constructed under the Michigan Central Rd. at Townsend Center, and another under the G.T.R. at Simcoe. The maximum gradient is about 1½% and the average about 6-10 of 1%. In construction it is intended to use an 80-pound rail, and it is hoped to complete the line by the end of 1908.

Hamilton Street Ry.—On the application of the City of Hamilton the Ontario Railway and Municipal Board has ordered that the rails recently laid on Herkimer St., between Queen and Locke Sts., be taken up and relaid, so as to leave the "devil strip" 4 ft. wide. In relaying the track recently the strip had been widened to 5 ft.

Hamilton, Waterloo and Guelph Ry.—The Hamilton Parks Board and Finance Committee has approved the by-law granting a franchise, and J. Patterson on behalf of the company has accepted the terms imposed. A right-of-way is granted along the northerly portion of Dundurn and Harvey Parks, but for the most part the line will run through G.T.R. property. A private right-of-way will be acquired between Dundurn Park and the corner of James and Vine Sts., and work commenced as soon as possible. The line to Galt is to be completed by the end of 1909, and to Guelph a year later. Should completion be delayed, an extension of one year will be granted, provided the company can show that it has expended $100,000 on construction. It is provided that the motive power be electricity, and that six trips each way are to be run daily between Hamilton, Galt and Guelph. The fare is fixed at 2c. a mile, and 1¾c. a mile return, and the company must allow any other company to

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use the right-of-way in the city on terms fixed by the Railway Commission. (Sept., pg. 683).

Huron and Ontario Ry.—There has been deposited with the Secretary of State at Ottawa duplicate of a mortgage dated July 30, made between the H. and O.R. Co., and the Trusts and Guarantee Co., as mortgagees, whereby the company mortgaged its real and personal property, franchises and undertaking.

Lanark-Rideau.—E. T. Haines, of New York, who was interested in the Hamilton, Ancaster and Brantford Ry., finally selling out to the Brantford and Hamilton Ry., has been in Lanark, Ont., with a view of undertaking the construction of an electric railway there. The line which it is proposed to construct would extend from Lanark Village to Rideau Ferry. A. T. Judd, of Toronto, is interested in the promotion of the company. There is no charter at present in existence for the line.

The London Street Ry. Co. is being asked to arrange for extensions of its lines in the north end of the city.

Montreal and Southern Counties Ry.—The question of passing a by-law to permit the company to enter the city and operate electric cars there, which was discussed in July last, and adjourned for the reconsideration of the city council, is again to the fore. A new by-law has been prepared and submitted. The company seeks powers to operate passenger and freight cars on certain streets in the city, and to construct a Y; it also desires to take passengers and freight at its city terminal and convey them outside the city limits, but not to carry passengers or freight to points between its city terminal and the city limits. On its part, the company undertakes to pay its share of the cost of removing ice and snow from all streets occupied by its lines to the satisfaction of the city surveyor, and should it fail to comply with such provisions it shall pay to the city such sum as may be deemed necessary to enable the city to perform the work. The company will also do a certain amount of street paving, and pay to the city $500 for the streets actually used.

Musquodoboit-Stewiacke (N.S.)—A project is being discussed to construct an electric railway to connect these two places by way of the Stewiacke Valley. It is thought that sufficient water power can be obtained in the neighborhood to operate the system, but if not, auxiliary stations will be erected at various points. It is proposed to arrange a service for both passengers and freight, and to apply to the Provincial Government for a subsidy.

Niagara, St. Catharines and Toronto Ry.—The work on the extension to Welland is being pressed forward, and it is expected that cars will be running to the Welland River by the end of October. It is stated that cars will not enter the town until next year, but that the company will run a bus from its terminal to the town until the further extension is completed.

Quebec Ry., Light and Power Co.—New track is being laid along St. James St., so as to form a connecting link between St. Peter St., and the east end of Dalhousie St.

A fireproof car barn is to be erected in St. John St., to be constructed with steel girders and concrete roof. It is estimated that this will cause a considerable saving in insurance.

Sydney and Glace Bay Ry.—The new power station at Glace Bay is 50 by 75 ft., and is being erected by Rhodes, Curry & Co., Amherst, N.S. It will be equipped with three 150 h.p. boilers, one 300 h.p. upright engine, one 25 k.w. railway generator in addition to the engine and generator in use at the existing power station, which will be moved to the new building. The engine and boilers are to be supplied by the Robb Engineering Co., Amherst, N.S.

Westmoreland Power Co.—Application will be made next session of the New Brunswick Legislature for an act incorporating a company with this title, with all the powers usually granted to electric street railway, light, heat and power companies, with authority to construct such street railway in the city of Moncton, and such extensions into the counties of Westmoreland, Kent, and Albert as may be authorized; also to maintain and operate within the same territory an automobile service for the transportation of passengers and freight. Weldon and McLean, St. John, N.B., are solicitors for the applicants.

Windsor, Essex and Lake Shore Rapid Ry.—A regular service of cars has been inaugurated over the line from Windsor to Kingsville, passing through Essex, Ont. It was promoted by W. Newman, City Engineer of Windsor, and the late Dr. Brien, and later A. J. Nelles became associated with them. These did a large portion of the preliminary work of securing the franchises, etc., but it was not until May, 1905, that construction was started. A contract was entered into with the Keystone Construction Co., of Philadelphia, but owing to some difficulties the company did not carry out the contract, and J. Piggott & Sons reorganized the company, and completed the line. The track is laid with 80-lb. steel and is constructed according to the standard of steam railways. The overhead construction is of the catenary type, the trolley being suspended on steel cables, 7-16 in. in diameter, by hangers every 10 ft. Strain guys are placed at distances of 1,100 ft. to prevent slacking of wires; and the wires are carried on concrete poles. The power-house is at Kingsville, and is equipped with two 500 k.w. Westinghouse alternating current dynamos, driven by two cross-compound engines, steam being supplied by six boilers, each 360 h.p., erected by the Canada Foundry Co., Toronto. The cars are 55 ft. long, are fitted with lavatories, smoking room, and are equipped with air brakes. The motors are capable of developing a speed of 70 miles an hour. There are five motor cars and six trailers. For freight purposes the company has purchased an electric locomotive capable of hauling 40 loaded cars. Two cars will be reserved for baggage and express business. The officers of the company are: President, John Piggott; First Vice-President, Chas. Magee, Toronto; Second Vice-President, W. E. McKeough, Chatham; Secretary, W. T. Piggott, Chatham; Treasurer, W. C. Crawford, Tilbury; other directors: E. G. Stevenson, Toronto; W. R. Phillimore, M. Wilson, K.C., Chatham; P. Heseltine, Detroit, Mich.

Electric Ry. Finance, Meetings, Etc.

British Columbia Electric Ry.—Gross earnings for July, $151,340, against $103,013 for July, 1906. Working expenses, $77,878; renewal funds, $11,030; net earnings, $11,030; approximate income from investments, $11,036; net income, $73,468 against working expenses, $54,866; renewal funds, $9,624; net earnings, $38,523; approximate income from investments, $9,536; net income, $48,059 for July, 1906.

Grand Valley Ry.—A meeting of shareholders was called to be held at Brantford, Ont., Sept. 30, for the purpose of receiving a report, election of directors and auditors; to ratify the issue of bonds to the extent of $30,000 a mile, and a mortgage to secure the bonds; to ratify agreements for the purchase of the Brantford Street Ry., and the Woodstock, Thames Valley and Ingersoll Electric Ry., or either of them; and to confirm contracts for the extension of the lines.

The Grand Valley Ry. Co., on Sept. 7, deposited with the Secretary of State at Ottawa a mortgage made to the Trust and Guarantee Co., securing an issue of $4,000,000 of bonds.

Halifax Electric Tramway Co.—Railway earnings for Aug., $19,611.41, against $17,026.88 for Aug., 1906.

Montreal Park and Island Ry.—Following are the officers and directors for the current year: President, L. J. Forget; Vice-President, K. W. Blackwell; Managing Director, W. G. Ross; Manager, D. McDonald; other directors: Sir H. Montagu Allan, F. L. Wanklyn, Lieut.-Col. Henshaw; Secretary, P. Dubee. The M.P. and I. Ry. is owned by the Montreal Street Ry. Co., and does not issue a separate report.

Montreal Street Ry.—Passenger earnings for Aug., $322,204.56; total earnings, $329,755.11; against $293,401.69 passenger, and $300,278.36 total earnings for Aug., 1906 Operating expenses, $184,844.15; city percentage on earnings, $32,906.56; interest on bonds and loans, $17,851.27; contingent for renewals, $16,110.23; rent leased lines, $339.96; and surplus, $77,702.94 for Aug., against $158,415.38 operating expenses; $28,337.71 city percentage on earnings; $16,077.98 interest on bonds and loans; $15,013.92 contingent for renewals; and $82,433.37 surplus for Aug., 1906. Gross earnings for eleven months ended Aug. 31, $3,164,399.46; operating expenses, $1,946,389.33; fixed charges, $524,555.10; surplus, $693,455.03; against $2,794,947.90 gross earnings; $1,686,769.19 operating expenses $434,239.87 fixed charges, and $673,938.84 surplus for same period, 1905-06. Rental of leased lines is an extra charge in the current year's accounts.

Ontario and West Shore Electric Ry.—The township of Ashfield, Ont., has carried a by-law to guarantee the bonds of this company to the extent of $125,000.

Toronto Ry.—Car earnings for Aug., $319,797.64, against $275,836.46 for Aug., 1906. The car earnings for the eight months ended Aug. 31, have been quoted as $2,200,668, showing an increase of $233,720 over those for the same period of 1906.

Quebec Ry., Light and Power Co.—Owing to the absence from the city of a number of directors the annual meeting of shareholders called for Sept. 10 was adjourned to Oct. 10.

It is reported, on what appears to be good authority, that the C.P.R. Co. has obtained an option of the Q.R., L. and P. Co.'s stock.

Woodstock, Thames Valley and Ingersoll Electric Ry.—A meeting of shareholders was held at Woodstock, Ont., Sept. 9, when a resolution was passed ratifying the sale of the railway to the Grand Valley Ry. Co.

Electric Railway Notes.

A petition is being prepared in London, Ont., asking for a Sunday street car service.

A. Killingsworth, Manager of the municipally-owned street railway at St. Thomas, Ont., has resigned to accept a position on the Pere Marquette Ry.

It is reported that the Toronto Suburban Ry. Co. has secured an option on about 22 acres of the Holly estate at Weston, Ont., with a view of making a park and summer resort there.

During Aug. 166,301 passengers were carried on the Port Arthur, Ont., Electric Railway, the receipts being $8,315.05, against 146,176 passengers carried and $7,308.80 received during Aug., 1906.

At a joint meeting of the councils of Port Arthur and Fort William, held Sept. 13, at Fort William, Ont., the share of Port Arthur in the street railway was offered to Fort William for $250,000.

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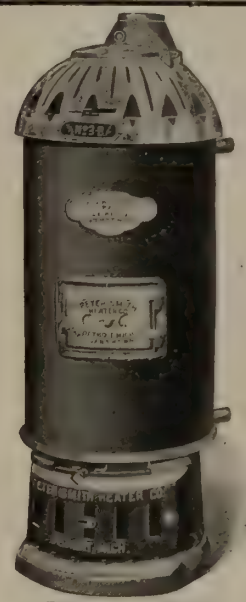

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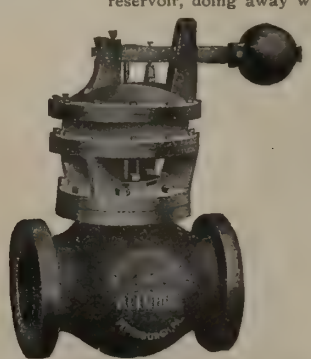

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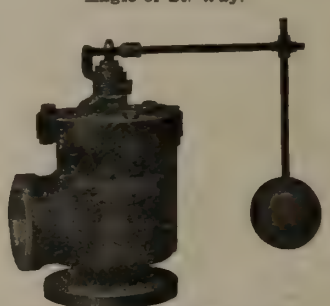

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C. E. A. Carr, formerly Manager of the London, Ont., Street Ry., and now manager of the Helena Light and Ry. Co., Helena, Mont., is taking an active part in steps to establish an electric railway and light association for the State of Montana.

The Walkerville, Ont., council claims that the Sandwich, Windsor and Amherstburg Ry. is not complying with the terms of its franchise, and has directed the town clerk to endeavor to enforce the penalty of $10 a day, so long as any defect continues.

A motion to commit the council of the town of Thorold, Ont., for contempt of court, has been dropped on the council giving an undertaking to lay their water-pipes so that no damage will be done to the Niagara, St. Catharines and Toronto Ry. track.

A number of employes of the Southwestern Traction Co. at St. Thomas, Ont., recently presented an illuminated address to G. H. Miller, in commemoration of an act of bravery by which he saved the life of another employe who had been caught by live wires.

An action taken recently by one of the stockholders in the Grand Valley Ry. Co., against A. J. Pattison, Jr., for issuing an improper statement of the company's position, was withdrawn in the police court at Brantford, Ont., the plaintiff admitting that there was no ground for the action.

D. J. Stewart, local traffic manager, has been appointed assistant to F. R. Glover, Assistant General Manager British Columbia Electric Ry. Co. His duties will be to act as intermediary between landowners and the company on matters concerning rights of way, etc. He is succeeded as local traffic manager by W. Dunlop.

The Dominion Park Company of Montreal has declared a dividend of 6% on its common stock, payable Oct. 1. Although the weather was extremely unfavorable, the season which closed Sept. 15 was a good one financially, and about 20% of the $250,000 bond issue has been retired. About 800,000 persons visited the park during the season.

That electric railway sleeping cars will soon be in demand is the opinion of a number of Indiana traction men who recently made a trip over the trolley lines between Indianapolis, Ind., and Detroit, Mich. They say that it is now possible to travel from Indianapolis by electric lines to the principal points in the neighboring states, requiring from eight to twelve hours, and if sleeping accommodations could be obtained, they would be patronized.

A writ has been issued on behalf of Mary M. Mitchell, of Woodstock, Ont., against the Trust and Guaranty Co., Ltd., as administrator of the estate of S. R. Ickes, deceased. The plaintiff seeks to have it declared that she is the owner of $4,000 worth of bonds of the Woodstock, Ingersoll and Thames Valley Electric Ry. Co., claimed by the defendant company, and that she is entitled to possession of same, after payment of certain loans, or in the alternative, that she is entitled to be paid the value of the bonds.

Intercolonial Ry.—In connection with the work of constructing a second track between Moncton and Painsec Jct., N.B., 7.25 miles, we are advised that the gradient has been changed from 1% to 0.5% on the present right-of-way. The bridges over Hall's Creek and at Humphrey's are double track deck plate girders on stone abutments. The overhead crossing at Union St., Moncton, is a through plate girder, having concrete floor and covered with paving brick.

Canadian Street Railway Association.

A special general meeting of this Association was held in Montreal, Sept. 12 and 13, the following being present: A. F. Townsend, Manager, Cape Breton Electric Co.; Hon. D. McKeen, President; J. Hutchison, director; J. W. Crosby, Manager; P. A. Freeman, Chief Engineer, Halifax Electric Tramway Co.; W. G. Ross, Managing Director; P. Dubee, Secretary; D. McDonald, Manager; H. E. Smith, Comptroller; R. M. Hannaford, Chief Engineer; M. Neilson, Consulting Engineer; D. E. Blair, Superintendent Rolling Stock; N. Graburn, Master Mechanic; A. Gaboury, Superintendent, Montreal Street Ry.; J. E. Hutcheson, Superintendent and Purchasing Agent, Ottawa Electric Ry.; E. A. Evans, General Manager and Chief Engineer; H. N. Bartlett, Superintendent Citadel Division, L. Burran, Electrician Quebec Ry., Light and Power Co.; R B. Emerson, Director; H. M. Hopper, Secretary-Treasurer, St. John Ry. Co.; W. H. Moore, Assistant to the President; A. M. Grantham, Purchasing Agent; W. R. McRae, Master Mechanic; W. H. Nix, Head Roadmaster, Toronto Ry.; J. McArthur, Superintendent Toronto and York Radial Ry.; A. H. Royce, President; G. C. Royce, Manager, Toronto Suburban Ry.; W. Phillips, Manager; J. S. Mackenzie, Purchasing Agent, Winnipeg Electric Ry.; Acton Burrows, Secretary-Treasurer of the Association.

The President, E. A. Evans, who occupied the chair, made some brief introductory remarks. The Secretary read letters expressing regret at not being able to attend the meeting from C. K. Green, Traction Manager, Dominion Power and Transmission Co.; N. P. Baker, Division Superintendent, International Ry. Co.; C. B. King, Manager, London Street Ry.; E. R. Wood, Vice-President, Toronto, Niagara and St. Catharines Ry.; J. A. Everell, Superintendent Montmorency Division, Quebec Ry., Light and Power Co.; T. Irwin, Chief Engineer, St. John Ry.; and J. Anderson, Manager Sandwich, Windsor and Amherstburg Ry.

The Executive Committee reported the election of Acton Burrows as Secretary-Treasurer, vice A. H. Royce, who declined re-election, and recommended certain changes in the by-laws respecting dates for meetings, and membership fees, which were adopted.

The Secretary-Treasurer's report dealt with the work of his office since his election on July 1, stated that 20 of the principal electric railway companies in Canada were comprised in the Association's membership, and urged that steps should be taken to secure the other companies as members It pointed out that the Executive Committee having decided that no papers should be read at this meeting the officers and officials of the member companies had been requested to suggest topics for discussion, and that the following subjects had been suggested and listed for discussion:

TRACK CONSTRUCTION AND MAINTENANCE OF WAY.

The best system of track construction for paved streets, using (1) Girder rails; (2) Tee rails.

The best system of track bonding for: (1) A new track on an unpaved street. (2) An old track on an unpaved street. (3) A new track on a paved street. (4) An old track on a paved street. The lowest cost, with efficiency for light traffic, to be kept in view.

The keeping of grass and weeds from off the track and right of way.

MOTIVE POWER AND OVERHEAD EQUIPMENT.

The value of storage accumulators in connection with rotary converter street railway generating stations.

The best system of measuring the output of a power station where the load fluctuations are heavy.

The average cost per k.w. power generated by steam.

The advantages and disadvantages of the adoption of a frequency of 15 cycles per second for heavy railway service.

ROLLING STOCK.

Insert versus grey iron brake shoes.

The question of trolley stands, harps and wheels for inter-urban work.

In the case of chilled wheels, does it pay to true-up flat wheels, or, where one wheel is good, to remove the flat wheel and press on the new one?

OPERATION.

Transportation for officials.

Different-colored versus uniform-colored street car signs.

Smooth versus rough cloth for uniforms.

TRAFFIC.

The carrying of baggage, such as trunks, on the same car with the passenger, or having them forwarded by freight, and charges paid extra.

The best method of collection of fares by conductors.

The best fare-box in use.

Methods of checking conductors' returns.

The best kind of transfer in use.

Methods of safeguarding the use of transfers so as to avoid doubling up on belt lines or on loops.

The carrying of freight.

Are electric railways successful competitors of parallel steam lines, so far as local traffic is concerned?

PURCHASING.

Imported versus domestic goods.

ACCOUNTING.

Is the system of accounting, as called for by the Ontario Railway and Municipal Board, adopted by the various electric railway companies under its jurisdiction.

The average cost of operating inter-urban and urban electric railways per car mile, exclusive of interest and sinking fund.

The average ratio of operating expenses to gross income for inter-urban and urban electric railways.

The sessions, during the Association's two days' meetings, were devoted to discussing the principal questions given above, the balance for want of time having to be left over till the next meeting. The discussions were very full and valuable, especially those on track construction and maintenance of way, which occupied the whole of one session. The discussion on the value of storage accumulators was greatly enhanced in interest by an excellent speech from J. Murphy, Electrician to the Department of Railways and Board of Railway Commissioners.

The representatives attending the meeting were the recipients of many courtesies from the Montreal Street Ry. Co., and from the local entertainment committee which was organized in connection with the meeting of the Association and the meeting of the Canadian Electrical Association, and which included a visit to the electrical show in the drill hall, a theatre party, the races at Blue Bonnets, and a visit to Dominion Park.

Intercolonial Ry.—Gross returns for Aug. are reported to have been $859,000, or $55,000 in excess of the revenue for Aug., 1906.

Baie de Chaleur Railway.—Judge Burbidge, of the Exchequer Court, has decided that the Baie de Chaleur Ry. be sold by sheriff's sale. The application was made by the Royal Trust Co., acting for Gallindes Bros., of London, Eng., asking for the foreclosure of the mortgage on the road. No interest has been paid on the outstanding bonds and Gallindes Bros. are creditors for £217,400.

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Shawinigan Terminal Ry. Locomotive.

The Shawinigan Terminal Ry. Co., Shawinigan Falls, Que., is having built a single phase electric locomotive, which will have a steeple cab with sloping end cabs, and will be supported on swivel trucks with 44-in. wheels, and equipped with 4 alternating current, compensated type motors. The approximate weight of the electrical equipment is 24 tons and the balance of the locomotive weighs about 27 tons, a total of 51 tons. All the wheels are driving wheels, so that the weight on drivers is 51 tons. The motor trucks will have cast steel side frames carried on journal boxes by semi-elliptic springs and hangers. The side frames, end frames and pedestals of the truck, also the longitudinal sills, cross sills and buffers of the locomotive platform, will be riveted and bolted together so as to secure a rigid structure capable of taking the maximum hauling and buffing strain for which the locomotive is designed. The springs will be of steel tempered in oil and proportionate to the weights to be carried. The wheels will be of cast steel, having spoked centers and removable tires. The axles will be of forged steel, and will have a diameter of 7½ in. at the wheel seat and 7 ins. between the wheels and in the motor axle bearings. Under the gear the diameter will be 7⅜ in. The motors will be inside hung, half the weight of each motor being carried on the axles and the other half carried by nose suspension on the truck bolster. The platform framing will be built up of steel panels with suitable cross sills and the flooring of steel ¼ in. thick. The bumpers will be of cast steel riveted to longitudinal sills, with push pole pockets cast in near the ends. The draw head casting will be supported from the bumper castings and the center sills. No pilots will be provided, the locomotive being equipped with wooden end steps. The main cab will be 9½ ft. by 8 ft. The end cabs will each be 5½ ft. by 10¼ ft. The roof and sides will be of sheet steel and the framing of angles suit-amperes with 30 cycle frequency. The rated maximum draw-bar pull of the locomotive is 11,000 lbs., and its maximum instantaneous draw-bar pull for starting purposes will be approximately 18,000 lbs. The above is for 30 cycles. With 15 cycle current, these values will be increased considerably. It is expected that the locomotive will pull a train of approximately 100 tons gross weight, running free on a grade of 5% at approximately 19 miles an hour. On a level track it is expected that the locomotive will be able to operate a train of 110 tons gross weight at a speed in the neighborhood of 45 miles per hour. The current will be collected by means of a pantagraph trolley, from a trolley wire located centrally above the tracks. Following are the approximate general dimensions: Length over bumpers, 31 ft.; length over cab, 28 ft. 6 ins.; height over cab, 11 ft. 6 ins.; height with trolley down, 12 ft. 10 ins.; width over all, 9 ft. 6 ins.; total wheel base, 22 ft. 6 ins.; rigid wheel base, 8 ft. 0 ins.; track gauge, 4 ft. 8½ ins.

The locomotive's electrical equipment is being built by the Canadian General Electric Co., and the balance of the work by the Canada Foundry Co.

The Hibbard Co. has been incorporated under the Quebec Companies Act, with a capital of $20,000 and offices at Quebec, to construct by contract or otherwise, works of an engineering character, such as bridges, railways, tramways, wharves, docks, etc. The provisional directors are F. A. Hibbard, Quebec; F. W. Hibbard, R. B. Hutcheson, H. G. Temple, Westmount, Que.; L. Gosselin, Montreal.

Grain Elevator Notes.

The Ogilvie Milling Co.'s elevator at Melita, Man., has been enlarged.

The Conger Lumber Co. is building a fifth elevator at Conger, Sask.

The Northern Elevator Co. is erecting an elevator at Foxwarren, Man.

The North Saskatchewan Elevator Co. is erecting an elevator at Benito, Sask.

The Saskatchewan Elevator Co.'s elevator recently erected at Kennedy, Sask., is now in operation.

The Northern Elevator Co.'s elevator at Holland, Man., has been sold to W. Campbell, of that place.

The Northern Elevator Co. has built an elevator with a capacity of 30,000 bush. at Bienfait, Man.

Lund's flour mill and elevator at Wapella, Sask., were destroyed by fire Sept. 1. There was only 750 bush. of grain in the elevator at the time.

McCaskel Bros.' grain elevator at Ladysmith, Man., was destroyed by fire recently. The loss is estimated at $1,400, partly covered by insurance.

At the annual meeting of the Farmers' Elevator Co., at Carlyle, Man., Aug. 28, it was reported that the amount available for dividend was $1,754, out of which it was decided to pay 7%.

Within the boundaries of the principal cities of the three western provinces, Alberta, Saskatchewan and Manitoba, and in Western Ontario, there are 245 elevators with a total capacity of 33,462,000 bush.

The McCabe Elevator Co. has acquired a site from the C.N. Ry., at Brandon, Man., upon which it will erect an elevator. The company proposes to erect elevators at a number of points on the C.N.R.

An elevator is being erected at Swift Current, Sask., and it is expected that it will be finished in time to handle this year's crop. The machinery is on the way for another elevator, which it is hoped will be erected this fall.

The British-America Elevator Co., which operates the Canadian Northern Ry. elevator at Port Arthur, Ont., has been reorganized as the Port Arthur Elevator Co. The alteration is one of name only and does not affect the officers.

The quantity of wheat in storage at the elevators at Port Arthur, Ont., Aug. 31, was reported to be 3,500,575 bush., and of other grains, 148,990 bush., against 145,877 bush. of wheat, and 24,183 bush. of other grains, at the same date, 1906.

A fire occurred at Muirhead and Black's elevator at Fort William, Ont., Sept. 9, doing damage to the extent of about $5,000. This elevator has only been in use a short time, and was erected to take the place of one destroyed last winter.

A by-law has been passed at South Battleford, Sask., voting $10,000 towards the erection of an elevator and flour mill at that place. Stock to the amount of $20,000 has been subscribed locally. The elevator is to be built at once and the flour mill is to be erected ready for operation by Feb., 1908.

What is regarded as a remarkably speedy clearance was effected at the Montreal Transportation Co.'s elevator at Kingston, Ont., recently, The steamboat Iroquois arrived in port in the early morning with a cargo of 102,000 bush., was unloaded, and on her return journey to Fort William by 5 o'clock of the same day.

The Colonial Grain Co., Ltd., has been incorporated under the Manitoba Companies' Act, with a capital of $150,000 and offices at Winnipeg, to own and operate elevators in connection with a general grain dealing business. The provisional directors are: J. C. Gage, K. B. Stoddart, T. H. Hatchard, W. C. Leistikow and A. Reid.

Work on the 2,000,000 bushel elevator, which is being erected for the Dominion Government at Port Colborne, Ont., is being pushed, and it is hoped to have one wing with a capacity of 850,000 bush. completed for this season's crop. When entirely completed the elevator will stand 170 ft. above the wharf, occupying a ground space of 210 by 75 ft.

On the representation of the Grain Growers' Association of Manitoba, the C.P.R. has reduced the charges for the storage of grain in its elevators at Fort William, Ont. The former charges were, ¾c. per bushel for the first term of 30 days, and the same amount for a second term of 30 days, or any portion of that time. The charge for the first term remains the same, but the charge under the new scale, for any period beyond the first term of 30 days, will be 1-30 of a cent per bushel per day.

The Port Stanley Elevator Co., Ltd., has been incorporated under the Dominion Companies' Act, with a capital of $100,000 and offices at St. Thomas, Ont., for the purposes of carrying on a general storage and warehousing business, and in connection therewith to acquire elevators, docks, wharves, steam and other vessels and freight cars. The provisional directors are: R. N. Price, St. Thomas; R. D. Ferguson, Southwold tp., Ont.; G. W. Tillson, W. D. Robertson, Tillsonburg, Ont.; John and Jas. Goldie, Ayr, Ont.

The International Blacksmiths' Association's fifteenth annual convention was held in Montreal, Aug. 20 to 22. At the opening gathering H. H. Vaughan, Assistant to the Vice-President C.P.R., gave an address on organization, and recommended the association to take up the handling of medium-sized forge work, and the cost of the same. The subjects considered were: Flue welding, J. Conners; Tools and formers for bulldozers and steam hammers, G. M. Stewart; Piece work, G. Bollinger; Discipline, and classification of work, S. Uren; Case-hardening methods, time taken and samples, G. Masser; Best fuel for use in smith shop, Jos. Jordan; Frame making, either steel or iron, also repairing same, G. Bothinger; What can each member do to increase the usefulness of the Association, G. F. Hinkens. Following are the officers for the current year: President, G. H. Judy, Allegheny, Pa.; First Vice-President, J. W. Russell Renova, Pa.; Second Vice-President, G. W. Kelly, Elizabeth, N.J.; Secretary and Treasurer, A. L. Woodworth, Lima, Ohio; Chemist, G. H. Williams, Medford, Mass.

The Alberta Government's telephone lines, according to an Edmonton despatch, have been completed in several parts of the province, and work is proceeding briskly on the unfinished sections. The Calgary-Hudson Bay line is now complete, and instruments will be installed very shortly. The MacLeod and Blairmore and Franklin are almost finished, and will be operated very shortly. The line from Wetaskiwin east to Hardisty will be completed this week, and the line from Lacombe to Stettler is complete. The section from Edmonton to Lloydminster is finished past Vegreville, and is expected to be completed this fall. [We do not understand the reference to a Calgary-Hudson Bay line. Probably there is a mistake in the despatch, as we do not think the Province is building a line to Hudson Bay, which is outside its jurisdiction.—EDITOR.]

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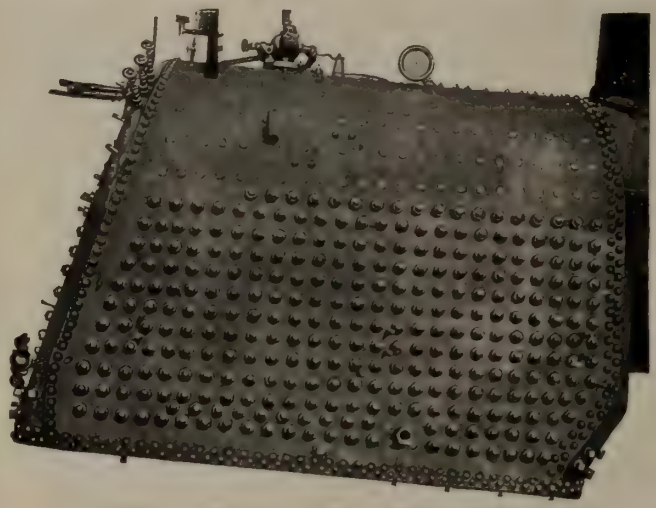

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MARINE DEPARTMENT

The S.S. Lusitania and Mauretania.

The Cunard S.S. Lusitania arrived in New York on her first voyage from Liverpool, Eng., Sept. 13, making the trip in 5 days, 54 min., from Queenstown, Ireland. The total distance from point to point was 2,722 miles, and the days run were: 5, 556, 575, 570, 593 and 493. The average speed was 23.01 knots an hour. The record for the Queenstown-New York trip was previously held by the Cunard S.S. Lucania, with a run of 5d. 7h. 23 min., but the fastest average speed had previously been made by the North German Lloyd S.S. Kaiser Wilhelm II., and the Hamburg-American S.S. Deutschland with 23.58 knots, and 23.84 knots respectively.

The dimensions, etc., of the Lusitania are as follows:

Length over all	785 ft.
Length between perpendiculars	760 ft.
Breadth, moulded	88 ft.
Depth	60.4½ ft.
Gross tonnage	32,500 tons.
Draught	33½ ft.
Displacement	38,000 tons.
Number of passengers	2,198
Type of engine—Parsons turbine	
Nnmber of boilers, cylindrical	25
Number of furnaces	195
Steam pressure	195 lbs.
Total heating surface	158,350 sq. ft.
Total indicated horse power	68,000
Speed (designed)	25 knots.

Engines (4) turbine developing 66,000 h.p., at 100 revolutions a minute, with working pressure 200 lbs. a square inch.

Boilers (25) Scotch marine type, having 192 furnaces; grate area, 3,950 sq. ft.; heating surface, 160,000 sq. ft.

Funnels (4) 25 ft. diameter; 155 ft. above keel.

Sea speed, 25 knots.

Estimated coal consumed, 1,200 tons per 24 hours.

Steam consumed per hour, 435 tons.

Air passing through furnaces per hour, 700 tons, or 21,000,000 cub. ft.

Water required for condensing per hour, 22,000 tons.

Engine room staff, 400.

The keel plate of the Lusitania is 5 ft. wide and 3¾ ins. thick, and is flush outside with the bottom of the ship. Associated with this flat keel is a vertical keel 5 ft. high and 1 in. thick. The double bottom is a vertical keel 5 ft. high and transverse frames into compartments in which water ballast may be carried. The tops of these tanks are carried well round the turn of the bilge, so that should the bilge keels be torn away and the hull pierced the entering water would be confined within the inner and outer bottoms. This is only one precaution in the direction of procuring unsinkability. The lower deck is made completely watertight. Below it are the lower orlop and orlop decks, and above are the main, upper shelter, promenade, upper promenade and boat—nine decks in all. In all, the Lusitania has 175 water-tight compartments, so that it is claimed for her that she is as unsinkable as a ship can be. The steel plates which cover the ribs or framing of the vessel or are used for the decks, bulkheads and casings or in other ways number 26,000, the largest being about 40 ft. long, and weighing from four to five tons. To secure these plates to each other and the structural framework of the ship, over 4,000,000 rivets have been used, aggregating in weight about 500 tons. The largest rivets are used in the keel plate, and these are eight inches long, and weigh 2¾ lbs. The rudder, which has two sets of steering gear, one of which is below the water line, weighs 65 tons, and the diameter of the rudder stock is 26 ins. The castings for the stern, stern post, shaft bracket and rudder together weigh 280 tons. The three anchors each weigh ten tons, while the 1,800 ft. of cable is composed of 22. in. links, the iron in which is 3¾ ins. in diameter and the weight of each link about 1½ cwts. Every portion of this has been vigorously tested, the links and shackles emerging successfully from a test strain of 370 tons. The Lusitania carries 18 lifeboats under davits in addition to a large number of life rafts, and has the submarine signalling apparatus.

The Mauretania—a sister ship—built on the Tyne, completed her three days' sea trials Sept. 20, and is said to have developed abilities in excess of what was expected. She is intended to be put on the route in Oct.

These steamships have been built under a special agreement with the Imperial Government by which the Government provided £2,600,000 at 2¾%, and one payment of £150,000 a year on condition that a minimum ocean speed of 24½ knots an hour be maintained and other conditions are complied with. The vessels are to be manned entirely by British crews, and the Government has the right to hire them at any time upon certain terms.

The Prescott-Havana Collision.

Commander O. G. V. Spain, Dominion Wreck Commissioner, assisted by Capt. A. Hawkett, assessor, held an investigation in Montreal in July into the collision between the S.S. Prescott and the S.S. Havana, the latter being loaded with pulpwood, and bound from Quebec to Erie, Pa., outside lock 1, Lachine Canal, the collision resulting in the sinking of the Havana. The following judgment was rendered Sept. 12:

It appears from the evidence adduced that the S.S. Havana, on the evening of July 2, arrived at the entrance of lock 1, Lachine Canal, and put two men ashore to look after the lines, which were to help the vessel through the lock. At this moment the lockmaster gave orders to the Master of the Havana to allow the S.S. Prescott, which was following her, to go ahead, in accordance with par. c, sec. 19, of Regulations for Dominion Canals. To execute these orders the Havana went alongside, and made fast to a barge, which was moored on the south side of the entrance to the canal, so as to allow the Prescott to pass, the Havana overlapping the barge a portion of her length. According to the evidence, at this time, the Havana was within 150 ft., approximately, of the canal gate. The Prescott passed the Havana, and arrived at the entrance to the gate. A. Ouelette, who was in charge of her at the time (the Master being down below), gave the signal to stop and reverse, by pulling two bells, but, finding his vessel still going ahead, he endeavored to communicate with the engine room, by pulling the forward bell, and also the port bell; he then gave two blasts of the whistle, which, he presumed, the engineers would understand meant to reverse, and, at the same time, he called down into the engine room for the engineer to stop and reverse the engines. The Prescott, however, by this time, had too much way on, and smashed into the upper gates of the lock. The rush of water caused by the smashing of these gates was enormous (as there was a difference of some 12 ft. in the level of the upper basin). This rush, which lasted for about 30 seconds, carried the Prescott back at the rate of some 15 miles an hour, her stern striking the port bow of the Havana, about 15 ft. from the stem, driving her on to the north pier, as the Havana was heading for the north side of the dock, causing considerable damage, and necessitating her being beached at the south end of the Bickerdike pier, where she sank.

The accident was caused by the wrong signal being communicated from the upper deck of the Prescott to the engine room, the gong only striking once, instead of twice, as the officer-in-charge of the Prescott, at the time, intended; the reason for this being, that the spring on the hammer of the gong in the engine room broke after the first stroke was given. Ouelette, from the evidence, apparently did everything in his power to stop the way of his vessel, when he found that his orders to the engine room were not being carried out, and that, instead of the speed of the Prescott being lessened, it was increased; but the court considers that this speed was too great, even before he attempted to give the signal to reverse the engines, it evidently being his intention to stop the way of the Prescott by her engines, instead of with lines, as laid down in sec. 5 and 26, of the Regulations for Dominion Canals.

Sec. 621, chap. 113, of an Act respecting shipping in Canada, distinctly states that there should be some approved arrangement to repeat back the signal from the engine room to the deck; in the case of the Prescott, as far as the court has been able to ascertain, there was no arrangement, approved or otherwise, by which a signal could be repeated back. Whether such a repeating signal would have avoided the casualty in this case the court is not prepared to state, but it is the duty of the owners to provide their ship with the proper appliances and equipment for her navigation, and it is negligence on the part of the Master to proceed on his voyage without them. The Act provides that all passenger vessels shall be equipped with certain mechanical devices, and the Inspector of Hulls overlooked the fact that the Prescott was not provided with a means of repeating signals from the engine room.

As far as the steamer Havana is concerned, if she had been allowed to proceed on her way into the lock, the probabilities are that no accident would have occurred, but, at the last moment, she was instructed by the people in authority to give way to the Prescott. She immediately endeavored to carry out these instructions, in the best and most convenient way, and made room, as far as possible, for the Prescott to pass her, by going alongside the barge and, although her actions were not in accordance with par. d, of sec. 19, of the Regulations for Dominion Canals, which says that she should not have been at a less distance than 300 ft. from the entrance to the lock, the court is of opinion, taking all the facts of the case into consideration, and the short time at the disposal of the Havana, that the local conditions were such that it was impossible for her to do otherwise.

The court, therefore, considers as follows: 1. There should have been repeating signals from the engine room to the deck of the Prescott. 2. The Master of the Prescott, that is to say if Capt. Dunlop is considered Master of the vessel—which the court presumes he is—should have been on deck at the time when his vessel was passing through the lock. 3. The engineer of the vessel is

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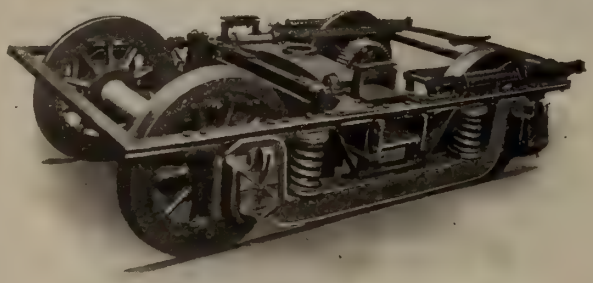

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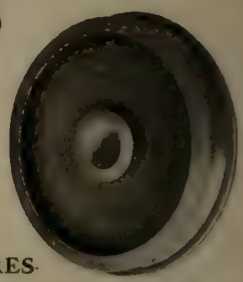

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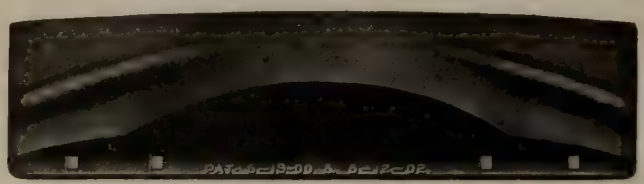

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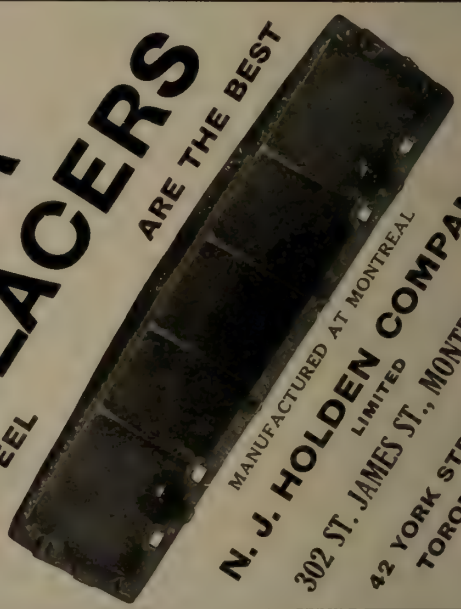

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not responsible, in any way, for the casualty, as he carried out the orders received by him, in obeying the signals from the deck. 4. The court concludes from the evidence that the bells, spring, gong, etc., in question had been inspected on occasions, and that the breaking of the spring of the hammer in question could not have been foreseen; but, as before stated, there should have been some means of repeating the signal from the engine room to the deck. 5. Sec. 26 of the Regulations for the Dominion Canals distinctly states that a vessel of over 200 tons, in navigating the canals, shall be provided with four good and sufficient hawsers, two laid astern, one laid ahead, and one breast-line, and each hawser shall be attended to by one of the crew, to check the speed of the vessel while entering the lock. These rules do not appear to have been carried out.

The court censures Capt. Dunlop for not seeing that the proper equipment was on board his vessel, and, also, for the vessel proceeding at too high a speed when entering the lock; although the court is aware that Capt. Dunlop was not on deck at the time, it is considered that, as Master of the vessel, he should have been. The negligence of the Inspector of Hulls, in reference to the lack of repeating signals from the engine room to the deck, is brought to the attention of the Department of Marine; and the court also considers, as before stated, that it is the duty of the owners to see that the vessel is supplied with all proper appliances and equipment. No blame is attached to the owner and Master of the steamship Havana.

The steamship Senlac, which sank after a collision with the S.S. Rosalind recently, and was subsequently raised, was offered for sale by public auction at Halifax, N.S., Sept. 26.

The Naval Pocket Book, edited by G. S. L. Clowes, London, Eng., corrected to June 7, has been issued. It contains a large amount of information respecting the navies of the world with facts as to the dry docks and ship repairing yards. This is carefully condensed and well arranged. The publishers are W. Thacker & Co., Creed Lane, London, Eng., the price being 7s. 6d.

The Inland Waterways Commission recently appointed by the U.S. Government met at Cleveland, Ohio, Sept. 22, and subsequently started on a trip through the Great Lakes and the Mississippi Valley. A writer in a U.S. magazine recently advocated the creation of a trunk waterway, so that ocean freighters could pass from the Gulf of St. Lawrence to the Gulf of Mexico.

Mrs. Patterson, wife of the lighthouse keeper at Cape Beall, on the south-west point of Vancouver Island, was presented recently with a piece of silver plate, and Capt. Hacket and Chief Officer McDonald, of the Government steamboat Quadra, with a gold watch and chain each, by the U.S. Government, for saving the lives of the captain and crew of the barque Coloma, wrecked near Cape Beale in Dec. last.

The Richelieu and Ontario Navigation Co.'s steamboat Picton was completely gutted by fire Sept. 21, while at her berth in Toronto harbor, and two lives were lost. The Picton is stated to be one of the oldest boats in the lake service. She was formerly known as the Corsican until two years ago, when she was re-fitted and renamed. Her value with cargo is estimated at $120,000. The cause of the fire was the dropping of a lighted torch lamp by one of the hands, who carelessly refilled it when lit, and the jury declared that the company had been negligent in not enforcing discipline in the handling of the fire fighting appliances.

The Dominion Line S.S. Alberta.

A subscriber asked us recently for information respecting the proposed combined use of turbines and reciprocating engines in the S.S. Alberta, which is being built at Belfast for the Dominion Line's Liverpool-Montreal service. We are officially advised that triple propellers are being adopted. Each of the wing propellers will be driven by four crank triple balanced engines, using steam of 215 lbs. pressure. They will each have a high pressure cylinder of 30 ins., intermediate 46 ins., and two l.p.'s of 53 ins. diameter, all with a stroke of 4½ ft. The exhaust steam from the four l.p. cylinders will pass into the turbine, which in turn will drive the central propeller. In this turbine the steam will be expanded down to 2 lbs. absolute pressure before exhausting into the condensers, of which there will be two, each supplied with independent air pumps. When the ship may be required to go astern, the exhaust steam from the reciprocating engines will go direct to the condensers, so saving the complication of the astern turbine, while for manœuvring in and out of port the reciprocating engines only will be used, which will be more than sufficient, as under such conditions they will develop over three-fourths of the total combined horse-power of the turbine and reciprocating engines. The full speed of the reciprocating engines at sea will be about 83 to 85 revolutions, and of the turbine about 230 revolutions.

Atlantic and Pacific Ocean Marine.

A recent despatch from Glasgow, Scotland, states that the C.P.R. has ordered two 12,000-ton steamers of the Empress type, from a Clyde firm, for its trans-Atlantic fleet.

The French Government is reported to have agreed to grant a subsidy to any company establishing a direct line of steamers between Marseilles and a Canadian port.

It is reported that the Allan, Dominion and C.P.R. Atlantic lines have decided to lower the third-class passenger rates on their vessels from Montreal to Continental ports, in order to enable them to compete with other lines.

A London, Eng., dispatch states that at a meeting of the Milford Dock Co., the Chairman in referring to the "All Red" route to Canada, said he had grounds for saying that the claims of Milford Haven as the terminal port would not be overlooked.

The S.S. Empress of Ireland, on a recent voyage from England, carried the largest number of passengers ever landed at Quebec from any ocean steamer. There was a total of 1,554 passengers, made up as follows: saloon, 326; second class, 332; steerage, 896.

J. W. Thomson, one of the principals of the firm of Wm. Thomson & Co., owners of the Thomson Line of freight steamers trading to Canadian ports, died at Leith, Scotland, recently. Many years ago the firm owned a fleet of sailing vessels trading between Leith and Quebec.

J. Thom, manager of the Dominion Line Steamships at Montreal, is reported to have stated that nine large vessels are to be constructed for the International Mercantile Marine Co.'s trans-Atlantic service, and that the first of these will be placed on the Canadian route in the spring. He did not confirm the report that vessels were being built to run at 30 knots an hour.

Press reports state that the C.P.R. contemplates several important changes in its Pacific Ocean service, on account of the large increase of freight now offering for Oriental ports. It is said that the steamships Montrose and Montcalm will be transferred from the Atlantic to the Pacific, at the close of the St. Lawrence navigation season, to take the places of the Athenian and Tartar, which have been sold to some Japanese shipping interests.

The Maritime Boards of Trade at a meeting at St. John, N.B., recently, passed the following resolution: "This convention, believing that fast high-class mail passenger and express freight service between the British possessions would be of immense material and political advantage to Canada, and all parts of the Empire, hereby endorses the All Red Line project proposed by the Premier of Canada, and unanimously adopted at the recent Imperial Conference held in London, and urges the Canadian Government to take all possible steps to hasten the inauguration of the scheme."

The British Board of Trade, under the provisions of sec. 10 of the Merchants' Shipping Act, 1906, has approved of the classes of ships for the purpose of carrying heavy wood goods as deck cargo, and passed regulations with respect to the loading of heavy wood goods as deck cargo, and for the protection of seamen from risk arising from the carriage of wood goods as deck cargo in uncovered spaces on board ship. The classes of vessels approved are iron or steel steamships, having covered spaces, that is to say, poops, bridges, forecastles or shelter decks which form part of the permanent structure of the ships, and comply with certain regulations

The Midland Dredge and Construction Co.'s tug Beaumont en route for the Georgian Bay arrived in Montreal recently, having accomplished her journey from Scotland by a circuitous route to enable her to call at various coaling stations, as her coal carrying capacity is limited. Her route was, Glasgow, Scotland, to Cape St. Vincent, Portugal; thence to the Canary Islands; from there to St. John's, Nfld., and on to Quebec. She was built at Kirkintilloch, Scotland, in 1907, her dimensions being: length, 69 ft.; breadth, 16 ft.; depth, 8 ft.; coal capacity, 31 tons; gross tonnage, 105; engines with cylinders, 15 ins. and 30 ins. and 21 ins. stroke, of 275 h.p., maintaining a speed of 10 knots on a daily consumption of 3 tons of coal.

The steamships Athenian and Tartar, which have been sold by the C.P.R. to the Osaka Shosen Kaisha, of Japan, who are starting a new freight line between Yokohama and Calcutta, India, were bought from the Union Steamship Line, and were at the time running between England and South Africa. They were brought to Canada during the Klondike rush in 1897, and placed on the Vancouver-Skagway route, but proved too large for the service. They were subsequently chartered for two years by the U.S. Government, and ran as transports during the Spanish-United States war, after which they were placed on the run between Vancouver and the Orient. The price paid for the vessels is said to be £55,000, delivered at Kobe, Japan.

The Quebec Steamship Co.'s new S.S. Guiana left New York on her first trip to Bermuda Aug. 31. She was built in Sunderland, Eng., and has the following dimensions: length, 345 ft.; breadth, 44 ft.; depth, 27½ ft. The deadweight carrying capacity is 4,800 tons. She is fitted for 62 first-class passengers, two to each room, and 80 steerage passengers. All the first-class sleeping accommodation is on the bridge deck forward of the machinery. Above this deck is a large house handsomely fitted as the dining saloon. The boats are carried on the sides of the deck over the dining saloon, and on this deck is a good-sized music room and smoke room, both handsomely fitted. The engines are on the triple compound system, working under a pressure of 180 lbs. per sq. in., supplied from three large boilers.

Maritime Provinces and Newfoundland.

A lighthouse is being erected on Sable Island, N.S., by the Dominion Government.

David Richards, President of the Interprovincial Navigation Co., Campbellton, N.B., has resigned.

The Halifax and Canso Steamship Co.'s steamboat Scotia made her first trip to East shore ports, Sept. 19.

E. R. McDonald has been appointed Secretary of the Pilotage Commission for the district of Shediac, N.B.

W. D. Bennet, Hopewell, N.B., has been appointed receiver of wrecks for the district of Hopewell, Albert County.

Press reports state that a contract has been placed in Liverpool, N.S., for two steamboats for J. A. Neville, of Halifax, N.S.

G. S. Mayes has submitted a tender to the St. John, N.B., City Council for dredging at berths 1, 2, 3 and 4, for the sum of $33,000.

Capt. J. Currie, an old Nova Scotia coasting mariner, and latterly a pilot, died at the Home for Aged Men at Halifax, N.S., Sept. 9, aged 97.

D. D. Mann is the name of a new steamboat engaged in the passenger and freight service at Lockeport, N.S. She is commanded by J. Nickerson.

The name of the schooner King of Avon, official number 112,064, registered at Windsor, N.S., has been changed by order-in-council to that of Hieronymus.

The schooner Atlantic, owned and commanded by Capt. Olsen, bound from Buenos Ayres to St. John, N.B., in ballast, was 20 days overdue at that port Sept. 22.

An order-in-council has been passed approving by-laws for the government of the pilots in the pilotage district of St. Mary and Liscomb, Guysborough County, N.S.

The four steamship berths at Sand Point, St. John, N.B., where the C.P.R. and Allan Line steamers are berthed during the winter, are to be dredged to a depth of 30 ft.

Press reports state that several vessels were wrecked and two lives lost in Bonaventure Bay, during a severe gale, which swept the Newfoundland coast Sept. 21 and 22.

The British wooden three-masted schooner Melba, 419 tons register, built at Gardner's Creek, N.B., 1899, and owned in New York, has been purchased by R. C. Elkin, Ltd., St. John, N.B.

D. J. Purdy has been negotiating with New York owners, with a view of purchasing a steamer to take the place of the Crystal Stream, recently destroyed by fire, on the Washademoak route.

The Department of Marine has issued in tabular form a very complete list of aids to navigation in Restigouche River, prepared by Lt.-Col. W. R. Anderson, Chief Engineer of the Department.

The St. John, N.B., City Council has appointed the City Engineer to act as its representative in conference with the engineers of the Department of Public Works, upon the question of harbor improvements there.

The S.S. Hudson, bound from Musquodoboit, N.S., to New York with lumber, took fire recently and was completely burned out off the coast of Nova Scotia. She was about 350 tons, and was owned in Bridgeport, Conn.

A new schooner for use in the fishing industry, similar to the Henry D. Davis, is under construction at Liverpool, N.S. Her dimensions will be: length, over all, 78 ft.; breadth, 18½ ft.; depth, 7½ ft.; 40 tons register.

The S.S. Nordamerika was seized recently by the Customs authorities charged with selling and landing intoxicating liquor at Parrs-

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boro, N.S., in June last. She was released on depositing $400 pending a decision of the case.

J. H. Longmire & Sons, Bridgetown, N.S., are having built at Shelburne, N.S., a 70 ft. schooner to be used between Bridgetown and St. John, N.B. She is to be supplied with gasolene engines driving twin screws for use in calm weather.

It is reported that surveyors are at work on the proposed railway route between Southwest Arm, Green Bay and the West coast, in connection with the projected short line service between England and Canada, via Newfoundland.

The following appointments have been made: T. Canty, to be a member of the pilotage authority for Bathurst, N.B.; Capt. J. McQuieny, to be harbormaster for Port Wade, N.B.; R. Miller, to be wharfinger of the Queen's wharf, Annapolis Royal, N.S.

The Norwegian barque from Halifax, N.S., to Conway, Eng., has arrived there after a rough passage of 63 days. Owing to the provisions running short, signals of distress were flown, but the crew were four days without food before the signals were responded to.

The keel of what is said to be the first steel vessel to be built in the Maritime Provinces has been laid in New Glasgow, N.S., for Carmichael & Co. of that place. The dimensions will be: length, 146 ft.; breadth, 34 ft.; depth, 14 ft., and about 400 tons gross.

Although there has been a considerable increase in the wages paid to seamen recently, there is still a shortage of men, and vessels sailing from St. John, N.B., have for some time had their dates of departure postponed, in some cases, as much as two weeks owing to this.

Two members of the crew of the schooner Muriel were each presented with a silver watch by the Dominion Government, at Lunenburg, N.S., recently, for bravery in rescuing the captain, who was knocked overboard in a storm while on a trip to the West Indies.

The Norwegian Government has awarded Capt. Cottrell, Marine Superintendent of the Elder-Dempster Line, a silver cup, and W. H. Havercroft, of the S.S. Sokoto, a silver medallion for saving the lives of the crew of the Norwegian barque Wellington in mid-ocean, Dec. 3, 1906.

The steamship Senlac, which was damaged recently in a collision with the Rosalind, is at Plant wharf, Halifax, N.S., where the question of her ownership is still unsettled. The appraisers have valued her, as she floats, at $28,000, and declined to accept complete abandonment.

The steam tug Samson, built for the Lahave Steamship Co., of Bridgewater, N.S., was launched at Shelburne, N.S., Sept. 3. Her dimensions are: Length, 85 ft.; width, 20½ ft.; depth, 9 ft. She is to be used for a general towing and wrecking business along the south shore.

The S.S. Dahomey, which has been running between Liverpool, Eng., and Halifax, N.S., in connection with the Furness Line, has been chartered by the Pickford and Black Steamship Lines to take the place of the S.S. Orinoco, which was recently wrecked near Cape Sable.

The S.S. Hermann Winter, New York to Boston, collided with the S.S. Silvia, New York to Halifax, N.S., recently, and had about 25 feet of plates torn from her starboard bow. The Silvia, it is stated, was at anchor at the time of the collision and sustained no damage.

Press reports state that the Interprovincial Navigation Co. is considering a proposal from W. Thomson and Co., Ltd., of St. John, N.B., to manage the steamboat Lady Eileen, by which the shareholders would be guaranteed a dividend of 6% per annum. The Lady Eileen runs between Campbellton and Gaspe and Bonaventure, Que.

The S.S. Strathord, from Ardrossan, Scotland, to New Zealand, was recently taken into St. Lucia, West Indies, by the chief officer, who reported that the Captain, L. T. Mudie, had died on the voyage. Capt. Mudie was well known in Montreal, having had command for many years of the S.S. Fremona, of the Thomson Line, engaged in the trade at that port.

A. Nilsen, captain of the steamship Borgestad, who has been a resident in Sydney, N.S., for the past ten years, has resigned command of that vessel and has retired to his old home in Norway. He was for six years captain of the Britannic, after which he was transferred to the Christian Knudsen, and subsequently to the Borgestad, all operated under charter by the Dominion Coal Co.

The Chestnut Canoe Co., Ltd., has been incorporated under the New Brunswick Companies' Act, with a capital of $48,000 and offices at Fredericton, N.B., to carry on the manufacture of canoes, steam launches, motor boats, engines, motors, etc. W. Kitchen, railway contractor, Kingsclear, N.B., and K. Chestnut, Fredericton, are among the provisional directors.

The St. John, N.B., City Council are discussing the allotment of berths for the winter season for the vessels of the various companies using that port. Reports state that the C.P.R. claims that certain berths should be allotted to them continuously, on the ground that it handles considerably more freight than all the other lines combined, and a larger number of passengers than any one of them.

The Halifax and Canso Steamship Co.'s steamship Scotia sailed on her first trip to eastern shore ports Sept. 19. She was built at Mahone Bay, and her dimensions are: length, 130 ft.; beam, 27 ft.; depth of hold, 9½ ft.; tonnage, 268 tons register; and a capacity of 2,500 barrels below deck. She is to replace the Strathcona, which was destroyed by fire off Isaacs Harbor about nine months ago.

At the annual meeting of the shareholders of the Canada Atlantic and Plant Steamship Co., Ltd. (Plant Line), held at Halifax, N.S., Sept. 11, the statements for the financial year showed satisfactory business. Following are the officers for the current year: President, A. W. Perry; Vice-President, McC. Grant; Treasurer, H. G. Perry; Auditor, R. C. Verner; Sec. and Eastern Manager, H. L. Chipman.

The schooner Chlorus, which was confiscated to the Dominion Government, owing to the alleged breaking of the law by her owner in bringing Chinese to Cape Breton, has been taken to Westmount and stripped of her fittings, etc. She is an old hulk, having been built at La Have, N.S., in 1875. Her dimensions are: Length, 64 ft.; breadth, 20½ ft.; depth, 8¼ ft.; register tonnage, 57 tons. Registered at Yarmouth, N.S., number 69,217, in the name of D. J. McDonald, Glace Bay, N.S.

The Atlantic Shipping Co., Ltd., has been incorporated under the Dominion Companies' Acts, with a capital of $12,000 and offices at Maitland, N.S., to purchase the barque Kate F. Troop, and to pay for the same with fully paid up shares of the company; to sell the vessel and to purchase others as may be advisable, and to carry on a general navigation business. The provisional directors are: G. N. Crosby, Mrs. T. I. Crosby, Beaver River, N.S.; G. S. Crosby, C. K. Thurston, Maitland, N.S.; P. L. Hatfield, Acadia, N.S.

The new lighthouse at Cape Race, Nfld., it is reported, has the largest lantern yet constructed for lighthouse work. The diameter of the lantern is 17 ft. 1½ ins.; the focal length of the lenses, which project a beam of light having an intensity of 1,100,000 candle power, is about 50 ins. The burner, which is of 2,400 candle power, is of the petroleum vapor type, and is used in conjunction with an 85 m/m incandescent mantle. The whole is supported by a tower of reinforced concrete, the total height being about 100 ft. Intermittent flashes will be given at the rate of eight per minute from west to east.

A schooner named Decorra, 157 tons register, loaded with coal, drifted ashore, three miles west of Gulliver's Cove, near Digby, N.S., recently. There was no one aboard of her, she having been apparently abandoned by her crew, of whom there was no trace. Letters found aboard addressed to Capt. J. W. Berry, Larrabee, Me., imply that that is the name of the owner, but he perished in the wreck of the schooner Emma A. Harvey in Bogart's Cove, Digby, N.S., last Dec. It is reported that the crew landed at Machias, Me., having abandoned the vessel owing to a leakage. A searching inquiry, it is said, is to be held, as there appears to be a doubt about such a leak as would justify abandonment.

Marine Notes from the Twin Ports.

Our Port Arthur correspondent wrote, Sept. 6: The total shipments of the crop of 1906, through Port Arthur and Fort William, to Sept. 1, amounted to 51,500,000 bushels. The elevators at both these ports are practically full to-day, with a large amount of this year's crop still in interior elevators, and unmarketed, so that while the present prospects for the crop of 1907 are that it will be a light one, possibly in the neighborhood of 65 to 75 millions of bushels, the outlook for the lake carrying trade is good, owing to the large amount of the old crop still on hand to be moved.

Coal receipts at the head of the lakes exceed anything in the history of these two ports, and it is quite evident from the quantity still to be received, that all four docks will be worked to their fullest capacity to the close of the season, to take in the quantity already under contract.

It is almost impossible to pick up vessels for any kind of wild trade out of here, such as timber, wild coal cargoes, or pig iron.

The Atikokan Iron Co. is now offering its first shipments of pig iron for lake delivery at eastern points. This is a trade that from now on will grow very materially, as the blast furnaces are about to quadruple their plant.

This is the off season for the package freight business, and it has consequently slackened down rather below the normal, but will soon pick up now that the fall trade is commencing.

The Canadian Lake Line is adding two steamships to its line, the first of which should be in commission on the lakes about Oct. 15, and the other about the end of Oct.

Upper Lake passenger travel has exceeded anything in the history of Lake Superior. The Northern Navigation Co.'s S. S. Huronic has been filled to her capacity for the past three months. The C.P.R. steamships and the Booth line steamboats have had more passengers than they could well take care of. More and more tourists are coming this way each year.

Large quantities of material, and the entire plant of the contractors, have arrived for the construction of the new Government breakwater, which is being extended from the old breakwater in a general southerly direction, and will be continued to the mouth of the Kaministikwia River at Fort William. When this breakwater is completed, Port Arthur will have a harbor with a capacity for handling more tonnage than any port on either side of the chain of lakes.

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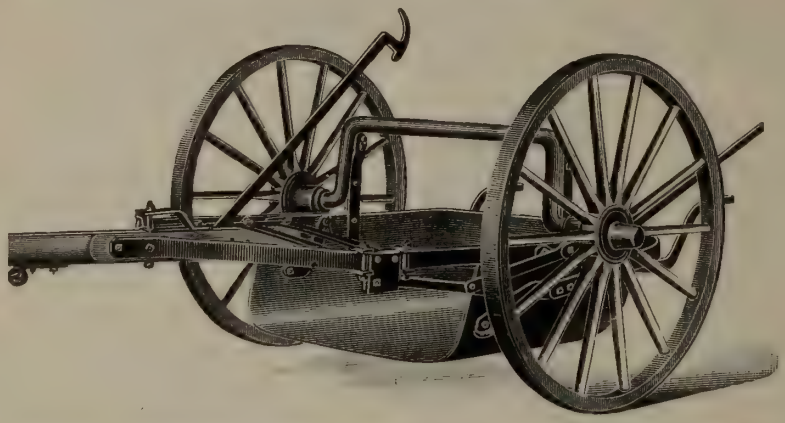

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BOSTON, MASS.

The Government is placing a gas buoy at Jackfish. It has installed a new foghorn on Thunder Cape, and is about to do the same at Victoria and Welcome Islands. These very necessary coast aids will do much to facilitate the navigation of these waters in thick and heavy weather.

The Government has done very wisely in keeping the Welland and St. Lawrence canals open on Sundays, beginning Sept. 1, for the balance of the season. This will materially aid vessels in the Kingston and Montreal trade, and add very largely to the tonnage passing down the St. Lawrence River.

The following shows shipments of grain by vessels from Fort William and Port Arthur from the opening of navigation, Apr. 29 to Aug. 31, 1907, and also for the crop year, 1906 (Sept. 1, 1906, to Aug. 31, 1917), with ports of destination:

	WHEAT.				OATS.		BARLEY.		FLAX.	
	Apr. 29 to Aug. 31, 1907.		Crop Year 1906.		Apr. 29 to Au. 31, '07	Crop 19 6	Apr. 29 to Aug 31, '07	Crop 1906	Crop 1906	
	Canadian Ves'ls	Foreign Ves'ls	Canadian Ves'ls	Foreign Ves'ls						
Owen Sound	875,700.20		1,845,332.40		2,383,446.10	3,824,584.08	132,978.36	200,174.20	144,216.07	
Midland	1,477,812.40		3,064,877.20		109,841.26	225,037.02	35,851.16	35,851.16	.....	
Tiffin	205,000.00		305,000.00		.....	.....	.....	.....	.....	
Depot Harbor	3,324,218.10		6,358,946.20		693,074.28	874,081.00	212,771.36	230,350.14	.....	
Collingwood	229,468.40		736,501.00		27,432.12	53,775.10	.....	30,737.44	.....	
Point Edward	1,306,426.20		2,842,906.30		56,184.06	137,452.30	5,000.08	65,358.40	158,117.45	
Meaford	647,528.50		1,823,674.10		296,046.02	331,582.18	14,842.28	14,842.28	.....	
Goderich	1,985,932.20		2,789,423.20		649,568.06	649,566.06	69,928.00	69,928.00	130,191.29	
Ports on Welland Canal	109,650.20		689,338.10		.....	.....	.....	.....	.....	
Ports on St. Lawrence	7,376,201.40		11,679,151.40		3,480,535.28	3,939,817.26	265,212.02	468,889.20	102,583.07	
Port Huron	263,416.40	454,542.10	383,223.30	454,542.10	.....	.....	.....	.....	.....	
Buffalo	2,860,557.40	5,383,527.10	4,750,827.50	12,292,069.30	969,518.24	969,518.24	38,521.30	38,521.30	.....	
Erie	60,001.30		298,103.10	934,525.50	.....	.....	.....	.....	.....	
Chicago	.....	.....	.....	71,307.30	.....	.....	.....	.....	.....	
Canadian Vessels	20,721,617.10	5,838,069.20	37,967,507.40	13,752,445.00	8,665,648.06	10,904,417.22	775,106.12	1,154,651.20	535,111.32	
Foreign Vessels	5,838,069.20	454,542.10	13,752,445.00	.....	.....	.....	.....	.....	.....	
Totals	26,559,686.30		51,719,952.40		8,665,648.06	10,904,417.22	775,106.12	1,154,651.20	535,111.32	

Province of Quebec Marine.

H. Poitevin has been appointed wharfinger of the Dominion Government wharf at Masson, Que.

J. S. Thom has been appointed a member of the Quebec Harbor Commission, succeeding H. Kennedy, resigned.

A large increase of traffic through the Lachine canal is shown for August, as compared with the same month last year.

E. Dussault has been re-elected as the representative of the Levis Board of Trade on the Quebec Harbor Commission.

L. Gelinas has been appointed Secretary-Treasurer of the Sincennes-McNaughton Company, Montreal, succeeding the late J. O. Poliquin.

The Interprovincial Navigation Co.'s steamboat Lady Eileen ran aground at high tide, in Gaspe Basin, Sept. 5. She was released without serious damage.

Cranston Cockburn, for 20 years superintendent of the dredge Richelieu, belonging to the Dominion Public Works Department, died in Montreal Aug. 23.

Tenders for the supply of two sets of triple expansion engines for each of steamers numbered 21 and 22, are under the consideration of the Marine Department.

Capt. P. Plante, a well-known navigator and steamship owner on the St. Lawrence and Saguenay Rivers, died at St. Petronille, Orleans Island, Que., Sept. 6, aged 86.

The Canadian Lake Line's steamboat Corunna, which was to have left Montreal, Sept. 14, broke her rudder and her departure was delayed until the damage was repaired.

The Norwegian steamship Armenia, of 1,169 tons register, in ballast, bound to Matane, N.S., ran on the rocks recently near Cape Chatte, and is regarded as a total loss.

It is reported that the Montreal Harbor Commissioners have purchased a large floating crane for use in that port, and hope to have it ready for use by the opening of navigation next year.

At a special meeting of the Quebec Board of Trade held recently, G. Tanguay, a member of the Quebec Legislature, was elected as the Board's representative on the Harbor Commission for that city.

A writ was issued recently by the Admiralty Court, for the seizure of the barge Robert, then in the port of Montreal, at the instance of A. Hetu and S. Desrosiers, who claim $206 and $25 respectively as salary due. The owners are O. Turcotte and L. J. Leclaire, Sorel, Que.

The dredging of the Beaujeu channel through the Crane Island flats below Quebec has been completed. This will allow of the passage of the large liners at low tide, thus obviating delay. Similar work on the St. Thomas flats, where there is only a 24 ft. draught, is contemplated.

The Quebec and Levis Ferry Co.'s ferry steamer Queen has been given an extensive overhaul in preparation for the winter season of navigation. The steamboat Pilot has been dry-docked for an overhaul, and extensive alterations are being made in the Polaris. The cost of the alterations on the three boats is estimated at $25,000.

Montford Granite has been incorporated under the Dominion Companies' Act, with a capital of $200,000 and offices at Montreal, with power among other things to own and operate steamboats, steam tugs, barges and other vessels. C. E. Leclerc, A. S. Hamelin, R. T. Leclerc, Mrs. V. Desjardines, J. H. Loranger, Montreal, are the provisional directors.

W. Davidson, the engineering expert who was recently engaged by the Montreal Harbor Commissioners to advise them as to the projected improvements in the harbor, has completed his survey, presented his report and returned to England. It is understood that the report deals principally with an extensive plan for the elevation of tracks, with other necessary improvements.

The depth of water in the river at Montreal has maintained a fairly high level this year as compared with previous years. There has been a drop of about 18 inches in 20 days, but no anxiety is felt on this account, the depth being 31 ft. 2 ins. in the new channel and 28 ft. in the old, while few vessels are coming into the harbor with a greater draught than 26 ft., the majority being only about 19 to 23 ft. draught.

The old portable wooden sheds have been removed and foundations are being laid for a group of new steel frame sheds on the Montreal harbor front. Considerable delay has been experienced in obtaining delivery of the structural steel, and it is stated that there is some difficulty in finding mechanical appliances capable of taking heavy freight from the holds of vessels to the second story. Elevators have been suggested, but nothing has as yet been decided on.

A statement of the revenue of the Montreal Harbor shows a total of $182,751 for the period commencing with the opening of navigation to Sept. 1 of this year, as compared with $180,487 for the same period last year. Of this year's revenue, $129,500 represented imports, $33,500 exports, and $19,751 local traffic. During Aug. the total receipts were $50,400, as compared with $48,987 for Aug. last year. The same month's customs receipts were $45,000, an increase of about $3,000 over Aug., 1906.

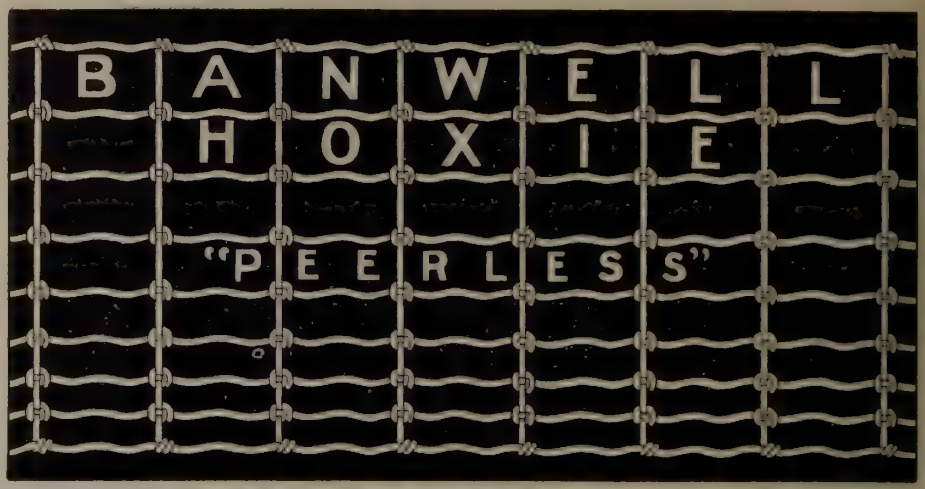
Signal stations have been established at the following points on the St. Lawrence River: Montreal, Longue Pointe, Vercheres, Sorel, Three Rivers, Batiscan, Cap a la Roche, Portneuf, St. Nicholas, Cap. Rouge, and Quebec. The stations at Montreal, Three Rivers, Cap a la Roche, St. Nicholas and Quebec will be operated by day and night, but the remainder by day only. Each of the stations named is connected with the Bell Telephone Co.'s system, and is provided with a mast 65 ft. high, with a cross spar 25 ft. long placed 20 ft. from the top of the mast, on which signals will be displayed for the benefit of boats passing between Montreal and Quebec. A code of flag signals for day use, and of lights for night uses, has been prepared, and distributed to the various vessels using the route. The work has been carried out under the superintendence of F. W. Cowie, Chief Engineer of the Montreal Harbor Commission.

The work of constructing the Tarte pier at Montreal has been completed, and by next year the Harbor Commissioners will have under their control what is probably the largest pier of its kind on the whole continent. There is accommodation for eight large ocean-going vessels, and this will obviate to a considerable extent the present difficulty in accommodating all the vessels that desire to berth there. The contract for erecting the pier was let to the W. J. Poupore Co. in July 1900, and construction was commenced in the following spring. The original contract price was $700,000, but owing to alterations and additions required by the Government, the price has risen to almost $1,000,000. The dimensions of the pier are: length on the west or upper side from the angle with the shore wharf, 1,000 ft.; on the east or lower side, 850 ft.; width, 325 ft.; height, 65 ft. from the bottom of the river, 26 ft. above the mean summer water level, and about 20 ft. higher than the two low level piers, the

Laurier and the Sutherland. Amongst the materials used were: 20,000,000 ft. of timber, 2,000,000 lbs. of iron bolts and plates, 200,000 cubic yards of broken stone, and 65,000 barrels of Portland cement. The structure has been examined and passed by the Government inspectors, and handed over to the Public Works Department.

The U.S. Government is carrying out extensive dredging operations in the lower Detroit river. The channel has been divided into 14 sections and operations are in progress in the fourth section, which extends into Lake Erie. The new channel will pass west of Bois Blanc Island and between Bois Blanc and Stony Islands. There is available for the work $2,000,000, and altogether $4,670,000 has been authorized by Congress to be spent on the improvement. It is expected that the new channel will be completed in about two years.

The Dominion Government has issued a pamphlet giving all available information respecting the Hudson Bay route, showing what it is necessary should be done in the way of railway construction to give a connection with deep water at Fort Churchill, and all the known facts regarding the navigation of the bay. In the course of 175 years it is shown that 750 vessels ranging from 70-gun ships to a 10-ton pinnace crossed the ocean, passed through the straits and sailed the bay in the service of the Hudson's Bay Co. Only two of these were lost



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Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian (generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
All prices are subject to change without notice.

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160	Acres at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	" " "	73.46	" "	180.00
"	"	10.00	"	"	239.70	" " "	81.62	" "	200.00
"	"	11.00	"	"	263.60	" " "	89.78	" "	220.00
"	"	12.00	"	"	287.60	" " "	97.96	" "	240.00
"	"	13.00	"	"	311.55	" " "	106.10	" "	260.00
"	"	14.00	"	"	335.60	" " "	114.32	" "	280.00
"	"	15.00	"	"	359.50	" " "	122.44	" "	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.
Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

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F. T. GRIFFIN, Land Commissioner, Winnipeg.

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Ontario and the Great Lakes.

The lighthouse at Winfield Basin, near Wiarton, Ont., is reported to have been destroyed by fire.

G. Trick has been appointed wharfinger of the Dominion Government wharf at Cook's Bay, Silver Water, Ont.

The Richelieu and Ontario Navigation Co. has at present the largest number of shareholders it has ever had.

J. & J. T. Mathews, of Toronto, are said to be about to place an order in Great Britain for a large lake freighter.

The branch canal of the Trent Valley Canal to Fenelon Falls, Ont., a stretch of about 4 miles, was opened for traffic Sept. 18.

The wrecked schooner Dobie, which has been a danger to navigation in Deseronto harbor since 1904, has been removed.

An order-in-council has been passed authorizing the City of Toronto to erect a sea wall in front of the Exhibition grounds.

The steamship North-West was quarantined at Buffalo, N.Y., recently for several hours, there being some cases of typhoid fever on board.

The steamboat Lakeside, of the Niagara, St. Catharines and Toronto Navigation Co., has been thoroughly overhauled and again placed in service.

V. Murray, a well-known river pilot, who died at Kingston, Ont., recently, was a son of Capt. J. Murray, of the Montreal Transportation Co.

The interests of H. Finger, of Port Arthur, Ont., in the Lake Superior Tug Co., it is reported, have been sold to W. Alexander, of Warsaw, Wis.

The Department of Railways and Canals has under consideration, tenders for the construction of a dam at Bobcaygeon, Ont., in the Trent Canal.

Two United States steamboats, A. G. Brower and Isaac L. Ellwood, collided in Lake Erie, off Bar Point, Aug. 28, and the latter vessel sank.

The tug Alert, while being towed by another tug in Georgian Bay, Aug. 28, was swamped and three of the five men on board of her were drowned.

The steamboat Monkshaven, which was wrecked near Port Arthur, Ont., two years ago, is to be raised, a contract having already been let for the work.

The Niagara, St. Catharines and Toronto Navigation Co.'s steamboat Garden City was placed in her winter quarters at Port Dalhousie, Ont., Sept. 12.

The name of the steamboat John Owen, official number 117,039, registered at Sault Ste. Marie, Ont., has been changed to Columbus by order-in-council.

The Dominion Public Works Department has under consideration, tenders for the construction of a public wharf at Sand Point, Ont., on the Ottawa River.

The freight steamboat Nepigon passed through the Welland Canal recently in 10½ hours, which is said to be the quickest passage made by any freighter.

Navigation was resumed on the Erie Canal, Sept. 16, after having been suspended since July 30, owing to the giving way of the aqueduct over Onondaga Creek.

Ontario No. 1, the new car ferry which is to run between Cobourg, Ont., and Charlotte, N.Y., had a successful trial trip, under the command of Capt. Forest, Sept. 12.

The barge B. B. Buckhout, with a cargo of lumber in tow, sprang a leak in Thunder Bay, Aug. 31, and was towed into the port, where she lies at the bottom of the slip.

G. Durnan, for over 50 years keeper of the lighthouse at Gibraltar Point, Toronto, died at Toronto, Sept. 7, aged 81. He retired from the lighthouse service in 1904.

The wooden steamboat John Otis has been purchased by the Detroit River Transit Co., and will be converted into a sand steamer for use on the M.C.R. tunnel at Detroit, Mich

The steamboat Orion, which went ashore on Calf Island in Lake Ontario recently, has been released and taken to Kingston, Ont., by the Donnelly Wrecking Co., for repairs.

The Toronto Ferry Co.'s ferry steamboat Shamrock, which was recently sunk after being on fire, has been raised. It is reported she will be re-modelled and in future used as a barge.

During July and August, the water level of Lake Ontario was lowered 3½ ins., but was 6 inches higher than last year, 30 ins. higher than in 1895, and 14 ins. lower than in 1876.

Press reports state that the C.P.R. intends to construct another dock at Fort William, Ont., at a cost of $1,000,000, and to erect six freight sheds, an elevator and other accommodations.

P. Hardy, inspector of lighthouses, has been making a tour of the lakes, in the Midland Navigation Co.'s steamboat Midland Queen, with supplies for the various lighthouses.

Two tugs were launched recently at Collingwood, Ont., and the machinery is now being rapidly installed. When completed one will go to Blind River and the other to Port Arthur.

The dredge Sir Wilfrid Laurier, which was sunk five years ago in 80 ft. of water, near Port Hope, Ont., has been raised and towed to Toronto, where she is being examined by the Polson Iron Works Co.

While entering the channel at Cardinal, Ont., Sept. 9, the barge Annie Minch broke away from the tug Cardinal and ran aground near the foot of the Galop Rapids. She was subsequently released by the tug Proctor.

While being towed by the steamboat American Eagle, in Lake Erie, during a heavy sea, the barge Houghton parted her cable off Bar Point, near Amherstburg, Ont., and immediately sank. The crew were all saved.

Capt. F. D. Forest has been appointed Master of the Ontario Car Ferry Co.'s car ferry steamboat Ontario No. 1, and W. Smeaton, formerly of the steamboat Turbinia, has been appointed Chief Engineer.

J. Ganley, of Sault Ste. Marie, is reported to be visiting England in company with his brother, where, it is stated, they will purchase a steamboat to replace the Batchewana, which was recently destroyed by fire.

A cave-in occurred in the tunnel shaft, in connection with the Detroit River tunnel, at Windsor, Ont., Sept. 11. It was presumed that the slide was caused by the recent heavy rains. The damage is estimated at about $2,000.

The Toronto City Council is considering the advisability of constructing a double-decked landing stage at the foot of Bay St., Toronto, thus allowing passengers to board or leave both decks of the ferry steamers at the same time.

The steamboat David W. Rust, while towing the C. G. Barnes, laden with ore in Lake Erie, ran aground off Pelee Point, Sept. 13, and the Barnes crashed into her stern; causing her to settle to the bottom. Both vessels are owned in Toledo, O.

The steamboat G. R. Crowe built for the St. Lawrence and Chicago Steam Navigation Co., Ltd., of Toronto, which was fully described in our issue of July, was launched from the Caledon Shipbuilding yards, Dundee, Scotland, Aug. 15.

The proposal to establish a dry dock at Port Dalhousie, or between there and Port Colborne, does not appear to be favorably received in marine circles, owing to the fact that large vessels could not pass the first lock at Port Dalhousie.

The C.P.R. steamship Assiniboia arrived at Levis, Que., from Great Britain, Sept. 11, where the work of dividing her for her passage through the canals will be undertaken. A complete description of this vessel was given in our Aug. issue.

W. A. Clark, of Collingwood, Ont., has contracted for the construction of a tug to be built there to be 85 ft. long, with 18 ft. beam and 9 ft. depth of hold. The engine and boiler of the tug Hodgson will be installed in the new boat.

The schooner Dundee dragged her anchor and drifted aground on a sandbank in the mouth of the Humber River, Lake Ontario, Sept. 10. Considerable difficulty was experienced in obtaining assistance, and she was not released until a week later.

R. W. Perks, who is again visiting Canada in connection with the Georgian Bay Canal project, is reported as having said that his company is prepared to go on with the construction of the canal if the Dominion Government will guarantee its bonds.

The G.T.R. car ferry Huron, while undergoing repairs in the Railway Co.'s slip at Windsor, Ont., was flooded by waves caused by passing excursion steamboats, and sank in 25 ft. of water. She was subsequently raised and the repairs proceeded with.

The vessels belonging to the Rideau Lakes Navigation Co., Ltd., have been placed in winter quarters six weeks earlier this year than is usual, owing to the shallowness of the water on the route, making it unsafe. The last trip for the season was made Sept. 21.

The Montreal Transportation Co.'s steamboat Advance was held at Thorold, Ont., in the Welland Canal, Sept. 17, at the instance of four discharged seamen on a claim for wages due. After the court proceedings, the claims were paid and the vessel proceeded.

The steamboat Lycorning, with a vessel in tow, took the wrong channel in the Detroit River, Sept. 18, and collided with the steamboat Isabella Boyce, also engaged in towing, at the Limekiln crossing, near Amherstburg, Ont., and caused her considerable damage.

As the result of a petition by the Dominion Marine Association, instructions were issued Aug. 31, that the Welland, Murray, Williamsburg, Cornwall, St. Lawrence, Lachine and Soulanges Canals be kept open for traffic on Sundays for the remainder of the season.

Press reports state that two steamboats will be built at Kingston, Ont., during the winter, for the Thousand Islands, and that C. E. Emory, of Frontenac Island, has volunteered to pay the cost. It is stated they will be equipped with searchlights of 1,000,000 candle power.

Foghorns are being installed on Welcome Island and at Point Porphrey, by the Dominion Government. The first named is of the single engine class, and the latter of the double engine class, and will be of material assistance to those navigating the north shore and Thunder Bay.

The St. Lawrence and Chicago Steam Navigation Co.'s steamship E. B. Osler was launched on Lake Erie Sept. 7. Her dimensions are: length over all, 510 ft.; keel, 500 ft.; beam, 56 ft.; depth, 31 ft. She is equipped with quadruple expansion engines and Scotch boilers.

The U.S. steamboat Alexandra Nimick ran ashore at Vermillion Point, Sept. 21, and was broken to pieces by the force of the waves. The captain and five of the crew were drowned.

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John J. Gartshore

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She was a wooden steamer of about 1,968 tons gross, her dimensions being: length, 318 ft.; breadth, 40 ft.

The first section of the M.C.R. Detroit River tunnel was launched at St. Clair, Mich., recently and towed to Windsor, Ont., where it will be lowered into a 500 ft. trench, by means of air tanks. It was expected that the second section would be ready for launching by the end of Sept.

Delivery of the first 25 of the 100 5 h.p. induction electric motors, ordered by the Department of Railways and Canals, for the Welland Canal lock gates, has taken place, and it is expected that the equipment will be completed in time for the opening of navigation next season.

The schooner Lizzie Metzner, registered number 116,549; length, 82¾ ft.; breadth, 21¾ ft.; depth, 6½ ft.; of 91 tons, has been sold by her owner, H. Deryaw, Kingston, to W. Lobb, South Bay, Ont., who will sail her for the remainder of the season. She was built in 1888 in the U.S.

It is reported that the wreck of the steamboat Dean Richmond, which was lost in a gale with all on board, in Oct., 1893, has been discovered near Vanburen Point, Lake Erie. She is stated to have had a cargo of lead and copper ore valued at $200,000, and attempts to locate the wreck have previously failed.

The steamboat Winnebago, a small vessel of 500 tons, Capt. G. H. Ewart, left Sault Ste. Marie, Ont., recently for San Francisco, Cal., via the St. Lawrence River and Cape Horn. The steaming capacity of this small vessel is estimated at about 200 miles a day, and the distance to be travelled is approximately 16,000 miles.

A private settlement was reached in the case where sailors sued the owner of the yacht Christine, at present in Toronto harbor, for wages due. This yacht was formerly owned by Lord Strathcona, and recently by Capt. Farquhar, of Halifax, N.S. and is reported to have been sold to a Halifax, N.S., resident for $20,000.

Consequent upon the appointment of Capt. F. D. Forest to the Ontario Car Ferry Co.'s boat Ontario No. 1, the following changes in the command of the G.T.R. Detroit River car ferries are announced: H. Oldenburg, Captain of the Huron, to be Captain of the Lansdown, and A. Dallargau, mate, to be Captain of the Huron.

The Algoma Central Ry. steamship King Edward, while endeavoring to make the port of Thessalon, Ont., Aug. 27, during a storm, ran aground on the rocks, tearing a large hole in her side. Temporary repairs were made at Thessalon, after which she was taken to Detroit, Mich., where she has been placed in the dry dock for proper overhauling.

Press reports state that Capt. J. F. Allan left Kingston, Ont., Sept. 9, for Detroit, Mich., to bring down the steamboat Ottawa, purchased by the Thousand Islands Steamboat Co. The vessel was purchased from the Bay Transportation Co., of Sandusky, O. She was built at Saugatuek, Mich., is about 115 ft. long, with 21 ft. beam and a draught of about 7 ft.

The fisheries protection cruiser Vigilant, stationed in Lake Ontario, has been supplied with four modern quick-firing guns, having a range of about 4½ miles. These have taken the place of the old pattern seven-pound muzzle loaders, with which she was originally equipped. The mounting of the new guns necessitated the strengthening of the decks.

The steamboat Nevada, of the Canadian Lake Line, which was wrecked at Farren's Point in the St. Lawrence, in July, has been raised and taken to Toledo, O., for repairs, by the Donnelly Wrecking Co., of Kingston, Ont. It is not expected that she will be in commission again this season, as the damage sustained is considerable, and extensive repairs are to be undertaken.

The U.S. lake survey steamboat General Williams reports the existence of a wreck lying in 36 ft. of water, 2 miles north 66° 10′ east of Colchester light. The wreck lies close to the main track of the freighters between Pelee Passage and Detroit, taking the north side of the Colchester light. The position of the wreck has been marked temporarily by a spar buoy bearing a white flag with red centre.

The first contract since the appropriation was voted for the construction of the Rice Lake-Ontario division of the Trent Canal, has been let to Brown & Aylmer, Peterboro, Ont. The contract extends from Campbellford to Widder Falls, 3 miles, with two dams and two locks. The contract calls for the work to be completed by Nov. 30, 1908, and the price mentioned therein is $600,000.

Complaints were made recently, that the contract let by the Dominion Government to the Great Lakes Dredging Co., amounting to $50,000, for the dredging of the sandbar at the mouth of the Rainy River, was not being carried out. It was stated that the old channel had been completely filled in, and that vessels had to use a roundabout route, entailing serious delays to those who rely on the steamers for supplies.

The Sable Logging Co., Ltd., which has been incorporated under the Ontario Companies' Act, with a capital of $75,000 and offices at Massey, Ont., to carry on a general lumbering business, is given power also to carry on business as ship owners or carriers by land or water. The provisional directors are: W. J. Bell, C. McCrea, Sudbury, Ont.; B. W. Arnold, Albany, N.Y.; J. A. Ferguson, R. Friar, Massey, Ont.

An amended tariff of wharfage tolls and dues to be levied on vessels and merchandise using the Government wharf at Sault Ste. Marie, Ont., has been approved by order-in-council. The Tariff hitherto in force was approved by order-in council dated Oct. 15, 1892. There is a slight increase in the tariff, made necessary by the greater expenditure entailed for the necessary assistance in handling freight at the wharf.

The package freight steamship Regina, for the Canadian Lake Transportation Co., was launched at Dumbarton, Scotland, Sept. 3. She is 256 ft. long, 42 ft. beam, with a carrying capacity of about 3,000 tons. A sister ship, to be named Kenora, is in course of construction, and it was hoped to have her launched during Sept. The Regina should arrive in Canada during Oct., and the Kenora is expected about a month later, when they will be placed on the Montreal-Port Arthur route, as part of the Canadian Lake Line.

The Montreal Transportation Co. has purchased the U.S. steamboat Iroquois, taking delivery at Windsor, Ont., Sept. 10. The Iroquois proceeded from Windsor to Fort William, where she loaded wheat for Kingston, Ont. After discharging at the latter port

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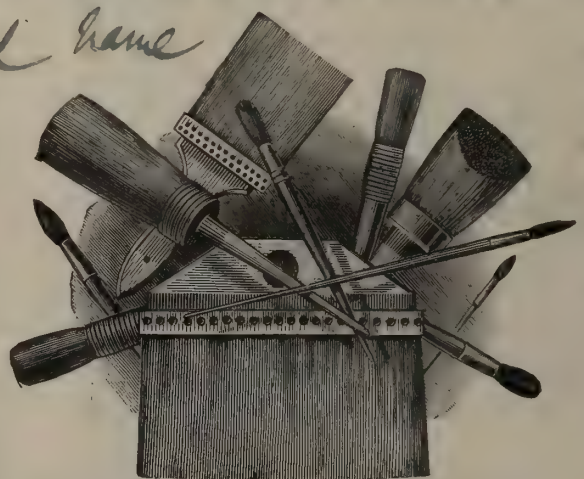

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she was remeasured under the Canadian rules, and is to be renamed. She will be engaged in the coal trade between Lake Ontario and Montreal, principally for account of F. Robertson, who has constructed an extensive discharging plant at that port. The Iroquois was built in 1892, is 242 ft. in length, with 42 ft. beam, and is of 1,957 tons gross.

J. L. Weller, Superintendent of the Welland Canal, in an interview recently said: "The first half of the present year has shown a very large increase over any previous half-year, new vessels are being added to the fleet every few weeks, and it may confidently be expected that the future of the Welland Canal as a heavy freight carrier is assured. Improvements are continually being made to facilitate the passage of vessels, and these, together with the abolition of all tolls, have done much to make this route what it should be, the main transportation route between the Northwest and the ocean."

The steamboat Canadian, built recently at Newcastle-on-Tyne, Eng., has arrived on the Upper Lakes, having made the fastest trip from England ever made by a lake vessel. She will be run by the Mutual Steamship Co., Ltd., operating under a Dominion charter. She has been built to special survey under the British corporation, and is of the following dimensions: length over all, 256 ft.; breadth, 43 ft.; depth, moulded, 26 ft.; the engines are placed at the after end of the vessel, and are of the triple expansion type with cylinders 19, 32, and 52 ins. diam., by 36 ins. stroke, with two boilers at a working pressure of 180 lbs.

Statistics show that the loss of life and destruction of vessels on the Great Lakes and connecting rivers, during the navigation season of 1906, was greater than usual. During the year 229 vessels were more or less damaged, and 49 were total losses. There were 250 lives lost during last year. The loss is placed at $2,043,850 and was greater than in any other season of the previous ten years except 1905, when losses amounted to $4,055,250. The list is headed by Lake Superior, with losses amounting to $691,000, followed by Lakes Erie, $428,000; Huron, $412,000; Michigan, $324,500; Ontario, $34,900; and in the connecting rivers losses amounted to $153,150.

The C.P.R. steamship Assiniboia arrived at Levis, Que., from Great Britain, Sept 11, where the work of dividing her for her passage through the canals will be undertaken. A complete description of this vessel was given in our Aug. issue. The cutting, etc., will be done by G. T. Davie & Son, under the supervision of H. Calderwood on behalf of the C.P.R. The cut will be made about 105 ft. from the stem, leaving the stern section about 235 ft. long, each section being protected at the cut end by a watertight bulkhead which has been provided. The two sections will be towed to Buffalo, N.Y., where they will be rejoined. The sister vessel, the Keewatin, reached Montreal Sept. 24, and after discharging her cargo, proceeded to Levis, where she will also be cut in two. It is hoped to have both the vessels in Owen Sound before the close of navigation.

The unreliability of sound during fogs is a subject with which all mariners should make themselves conversant, and the audibility of fog whistles during such periods should not be taken for granted. It may be supposed that a buoy emitting a loud and continuous whistle would be heard at equal distances, in any direction, in the absence of wind and without the interposition of any large, solid body, but experiments have proved that this is not the case. What are technically termed "sound shadows" are formed, within the area of which no sound can be detected, though the whistle may be blowing and can be distinctly heard outside the shadow. The existence of a bluff behind the whistle may cause the sound to ricochet over the water, causing it to be audible and inaudible, alternately, at irregular distances, until it dies away. Peculiar atmospheric conditions will also cause "sound shadows" during a fog, and any seaman who relies on his hearing of the whistle, and judging distance by the sound, can easily be misled. Warnings on these points have been issued, and experiments have been conducted from time to time by the U.S. Hydrographic Office.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM AUG. 15, 1907, TO SEPT. 15.

Name	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alice Mattes..	122,292	Prince Albert, Sask., 1907..	Screw 4 I H.P	72.0	18.0	4.0	120	44	Prince Albert, Sask...	Prince Albert Lumber Co., Ltd., Prince Albert, Sask.
Anna M.....	121,967	Kingston, Ont., 1906.....	" 1 "	28.0	5.3	2.4	2	1	Kingston, Ont.....	J. H. Davis, Kingston, Ont.
Anona.....	122,636	" " 1903	" 2 "	32.3	6.2	2.6	5	3	" "	A. W. Winnett, Kingston, Ont.
Arrow.....	122,602	Kenora, Ont., 1907.....	" 1 "	24.0	6.0	3.0	3	2	Kenora, Ont.....	J. W. Stone Boot Mfg. Co., Ltd., Kenora, Ont.
Auto Go.....	121,969	Kingston, Ont., 1906.....	" 2 "	22.8	4.1	1.8	1	1	Kingston, Ont.....	J. H. Davis, Kingston, Ont.
Bessie M.....	117,087	Collingwood, Ont., 1907....	" 13½ "	69.6	15.0	6.5	44	30	Collingwood, Ont....	J. P. McDonald, Blind River, Ont.
D. F. Co., 4...	122,029	Lunenburg, N.S., 1907....	" 1 "	26.6	9.8	4.5	7	6	Liverpool, N.S.....	J. F. Seldon and W. H. Doggett, Liverpool, N.S.
Daphne.....	122,028	U. S.....	" 5 "	44.0	10.4	4.6	11	7	" "	V. J. Paton and F. Clark, Bridgewater, N.S.
George H.....	121,968	Kingston, Ont., 1886	" 1 "	31.4	6.0	2.6	4	3	Kingston, Ont.....	G. A. Hammond, Kingston, Ont.
Hallio.....	122,631	" " 1906	" 2 "	25.8	6.0	2.2	2	2	" "	S. Anglin, Kingston, Ont.
Ida II.....	122,634	" " "	" 8 "	55.0	8.7	4.2	17	11	" "	J. H. Davis, Kingston, Ont.
Iona.....	122,635	" " "	" 14 "	60.0	10.0	4.4	21	15	" "	" " "
Lac St. Jean..	125,981	La Tuque, Que., 1907.....	" 2 "	56.7	14.5	3.0	43	27	Montreal, Que.....	F. Bergeron and P. Perron, St. Jerome, Que.
La Reine.....	125,982	" " "	" 1 "	26.4	6.0	1.8	2	1	" "	A. Paquin, La Tuque, Que.
Marguerite....	117,176	Windsor, Ont., 1906.....	" 10 "	23.0	6.9	2.9	4	3	Windsor, Ont.....	J. Parent, Windsor, Ont.
Nomad.....	121,970	Boston, Mass., 1906.....	" 4 "	48.0	10.5	5.0	19	13	Kingston, Ont.....	G. W. & W. M. Birks, Montreal, Que.
Ombaheka....	122,175	Lake Nepigon, Ont., 1906..	" 10 "	70.0	15.0	6.0	76	51	Port Arthur, Ont....	Revillon Bros., Montreal, Que.
Pewabic.....	122,176	" " " ..	" 8 "	48.0	12.0	5.0	29	20	" "	H. E. Knoble, Port Arthur, Ont.
Puffing Billy..	122,493	Shippegan, N.B.....	" 1 "	35.5	10.0	2.5	9	9	Chatham, N.B.....	J. H. Taylor, Campbellton, N.B.
Roberval.....	125,972	Toronto, Ont., 1907.....	" 27 "	128.0	24.0	9.0	344	157	Toronto, Ont.....	Polson Iron Works, Ltd., Toronto.
R. G. Weddell	122,360	Trenton, Ont., 1907.....	" 28 "	66.1	16.0	7.8	45	19	Kingston, Ont.....	R. Weddell, Trenton, Ont.
St. George....	122,350	Toronto, Ont., 1903.....	" 2 "	35.0	7.0	3.0	5	3	Toronto, Ont.....	R. Maw, Toronto.
Spray.....	122,283	Vancouver, B.C., 1907.....	" 22 "	81.0	19.0	10.0	118	62	Victoria, B.C.....	G. McGregor et al, Victoria, B.C.
Warren P.....	122,496	Shippegan, N.S., 1907.....	" 4 "	47.0	15.1	5.7	25	20	Chatham, N.B.....	W. S. Loggie & Co., Ltd., Chatham, N.B.
Winnanna.....	122,414	Midland, Ont., 1907.....	" 75 "	91.5	20.2	10.3	199	125	Midland, Ont.....	W. White, Midland, Ont.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM AUG. 15, 1907, TO SEPT. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alex. McLaurin.	122,486	St. Alexis, Que., 1907.....	Barge	106.0	22.5	7.8	162	162	Quebec, Que.....	J. C. Kaine, Quebec.
Annie.....	122,027	Liverpool, N.S., 1907.....	Schr.	115.0	28.3	10.9	225	193	Liverpool, N.S.....	A. W. Hendry, Liverpool, N.S.
Falcon.....	122,310	Tancook, N.S., 1907.....	Sloop	30.4	8.0	3.2	4	4	Lunenburg, N.S....	K. Hudson, Cowes, I. of W., Eng.
Fly.....	122,575	Wood's Harbor, N.S., 1906	"	32.4	11.2	6.0	10	10	Yarmouth, N.S....	H. Brannen, Wood's Harbor, N.S.
G. Bluteau.....	122,488	La Petite Riviere, Que., 1907	"	63.6	19.6	5.2	39	39	Quebec, Que.....	G. Bluteau, La Petite Riviere, Que
Gladys Olia....	122,574	Tusket Wedge, N.S., 1907..	"	32.0	11.2	6.0	10	10	Yarmouth, N.S....	D. Penney, Stoney Island, N.S.
Julia F. C.....	122,120	Ingonish, N.S., 1907.....	Schr.	40.0	12.5	6.8	12	12	Sydney, N.S.....	J. F. Lang et al, Ingonish, N.S.
Kenneth C.....	116,910	Port Greville, N.S., 1907...	"	162.2	35.4	12.9	551	475	Parrsboro, N.S....	G. M. Cochrane, Fox River, N.S.
Margaret.....	117,056	Queensport, N.S., 1903....	"	41.6	13.6	7.6	16	16	Canso, N.S.....	R. T. Mathews, Queensport, N.S.
Pie X.....	121,947	Yamaska, Que., 1907.....	Sloop	109.1	23.3	7.8	143	130	Sorel, Que.....	J. Denault, Notre Dame de Pierreville, Que.
Princess of Avon	117,165	Horton, N.S., 1907.....	Schr.	80.0	24.6	8.8	105	88	Windsor, N.S.....	W. C. Balcom Co., Ltd., Horton, N.S.
St. Elzear.....	122,489	Ste. Famille, Que., 1907....	Sloop	68.6	23.5	6.0	57	57	Quebec, Que.....	Telesphore Gagnon, Ste. Famille, Que.
Stanley L.....	125,961	Apple River, N.S., 1907....	Schr.	41.5	15.7	5.6	21	19	Parrsboro, N.S....	J. R. Lewis, Apple River, N.S.
S. P. Grogan...	122,487	St. Alexis, Que., 1907.....	Barge	106.0	22.5	7.8	162	162	Quebec, Que.....	J. C. Kaine, Quebec, Que.
Tantalus.....	122,382	White Horse, Yukon, 1907.	"	120.0	38.7	5.6	211	211	Victoria, B.C.....	British Yukon Nav. Co., Ltd., Vancouver.
Togo.....	117,086	Lachine, Que., 1897.....	Dred.	85.0	27.0	7.6	269	269	Collingwood, Ont..	Robt. Weddell et al, Trenton, Ont.
Utowana.....	117,057	Tancook, N.S., 1907.....	Schr.	42.6	12.6	6.3	15	15	Canso, N.S.....	F. C. Lohnes, Canso, N.S.

Manitoba, Saskatchewan, Alberta, Etc.

Press reports state, that North-West Mounted Police patrol boat Rouville will not be sent to Hudson's Bay this year, the police having established an overland route to Fort Churchill, and compliance with the laws by foreign whalers rendering a patrol vessel unnecessary.

The Lesser Slave River, the link between Athabasca River and Lesser Slave Lake, is to be dredged, and wing dams are to be constructed to increase the depth of water, and thus allow heavy draught vessels to navigate the river between these two ports, a distance of about 200 miles. A party of men left Edmonton, Alta., recently to commence the work for the Dominion Government.

Reports received at Athabasca Landing, Alta., from Herschell Island near the mouth of the Mackenzie River, Sept. 3, state that the sailing ship Duchess of Bedford has been lost. Capt. Mickleson and the crew left the ship in Feb. with 60 days' provisions and proceeded north. The Duchess of Bedford sailed from Vancouver, B.C., in 1906, on a voyage of discovery in the Arctic Ocean.

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The Sovereign-Germaine Collision.

Commander O. G. V. Spain, Dominion Wreck Commissioner, assisted by Captains Arch. Reid and Jas. Riley, assessors, held an investigation in Montreal on Aug. 30 and 31, into the collision between the S.S. Sovereign and the sailing barge Germaine, where she lay discharging cargo at wharf section 24, port of Montreal. The following judgment has been rendered:

"It appears from the evidence adduced that the steam vessel Sovereign (so-called Imperial) is a vessel reconstructed from the wreck of the Ottawa River Navigation Company's steamship Sovereign, which was burnt in March, 1906, and purchased by the present owners, the St. Lawrence Canadian Navigation Co., Ltd., from C. Sessewein; and she has been plying between the ports of Montreal, Three Rivers, Sorel and Quebec, without a proper certificate of registry, or license, since shortly after the opening of navigation. The vessel has been lengthened considerably, and been reconstructed without any special survey, though a copy of the certificate of survey (written in pencil), signed by W. Paul, Surveyor for the Port of Sorel (who is also the manager of the Company), was handed into the Court. In his evidence Manager Paul stated that he was assisted in the survey by a man by the name of J. K. Noel, of H.M. Customs. Mr. Noel, under oath, denied this.

"J. K. Noel, of H.M. Customs, whose duty, it appears from his evidence, is to inspect all vessels, and to see that their certificates of registry and inspection are in proper order, knew that the steamer Imperial (so-called) had no certificates, and yet allowed her to continue to run with passengers and cargo, between the ports aforesaid, in direct contravention of the law relating thereto. This whole matter appears to have been most irregular, and is brought by the Court to the attention of the Department of Customs."

"At about 5.00 p.m. on Aug. 23, 1907, the steamer Imperial (so-called), in charge of Wm. Paul, Senr., as Master, backed out from her berth, at section 20, and, when clear of the end of the Victoria pier, starboarded her helm, to cant the vessel head down river. When orders were given to steady the helm, the wheel could not be righted, and the vessel continued to move, in obedience to her starboard helm, till she struck, and sunk, the barge Germaine. The wheel chains are supposed to have jammed in the rudder blocks, and freed themselves again when she backed out, after striking the barge. The evidence is also very unsatisfactory with regard to the signals to the engine room. The Master, in his evidence, states that, although he knew the bells could not be relied upon, he gave the signals to stop and go astern by the bell, but, finding the engines were still going ahead, he went down to the engine-room himself to communicate with the engineer, instead of at once using the whistle, as he was in the habit of doing, to signal to the engineer to stop and go astern, there being no means of repeating the signals, or communicating with the bridge from the engine room, either by a repeating signal, or as voice tube. Sec. 621, cap. 113, of the Act respecting Shipping in Canada, is as follows:

"'Every passenger steamboat shall be provided with wire tiller ropes, or iron rods or chains, correctly and properly laid with suitable rollers for the purpose of steering and navigating the vessel, and shall use wire bell pulls for signalling the engineer from the pilot house, where bells are used, together with tubes of proper size so arranged as to transmit the sound of the engine bells to the pilot house, or other arrangement approved by the inspector to repeat back the signal'

"The evidence proves that there was a lack of discipline, and a want of organization, and of regular inspection, on this vessel; she was navigated in a haphazard manner. There was manifestly a want of care taken in reference to the equipment; the rudder chains had been foul, on previous occasions, from preventible causes, and the signal bell to the engine room had also failed to work, on account of the members of the crew having used the bell wires as clothes lines. The Inspector of Hulls overlooked the fact that there was no system whatever of repeating signals from the engine room to the bridge; this should have been taken exception to by the inspector, at the time of his inspection, and he should have called the attention of the owners to the omission. The defence of inevitable accident cannot be sustained. Capt. Wm. Paul, who holds a certificate as master of a passenger steamer on the minor inland waters, is severely censured, and warned to be more careful in future, as the Court considers that it is the master's duty to see that the steering gear, and means of communicating his orders to the engine room, are in proper order, more especially, as stated above, similar circumstances had occurred frequently. It is also recommended by the Court that the Department of Marine deal with the Inspector of Hulls for his negligence in this respect.

"The Court therefore finds that the steamer Imperial (so-called), her master and owners, are responsible for the sinking of the barge Germaine, which was providentially unattended with loss of life."

Writs of seizure in the Admiralty Court have been taken out against the steamboat Imperial by A. Massicotte and E. Laliberte, both of St. Jean de Chaillons, Que., who are the owners of the barge Germaine and her cargo respectively. Mr. Massicotte claims $5,500 for the barge, Mr. Laliberte claiming $500 for the cargo of bricks.

Negotiations are in progress between the Canadian and United States Governments, the Imperial Government being also a party, with a view to arranging a treaty for the settlement of all questions affecting international waterways.

The Montreal Board of Trade has been discussing the probable effect upon the water level of the St. Lawrence River, of the projected Lake Erie-Pittsburg Canal. The Board decided to draw the attention of the Government to the project and to guard against any diversion of water which might affect the level of the St. Lawrence.

B.C. and Pacific Coast Marine.

Capt. J. Griffiths, of Seattle, Wash, has purchased the German steamship Arthur Fitger, for use in the iron ore trade between Irondale, Wash., and Quatsino Sound, B.C. She was built by Harland & Wolff, Belfast, Ireland, in 1880, is 1,609 tons register, and will continue to sail under the German flag.

Joseph K. Smith and Co., Ltd., has been incorporated under the British Columbia Companies' Act, with a capital of $10,000 and offices at Vancouver, B.C., to carry on a general ship-broking business, and in connection therewith to own and operate steam and other vessels, docks, wharves, and warehouses.

Stracey and Garland, Limited, has been incorporated under the British Columbia Companies' Act, with a capital of $300,000 and offices at Vancouver, to take over the business of timber merchants and tug owners, etc., now carried on by A. H. Stracey and M. Neelin Garland, and to carry on and extend the same.

The City Wharf Co. has been incorporated under the British Columbia Companies' Act, with a capital of $25,000, to own and operate steam and other vessels; to act as ship brokers, insurance brokers, freight contractors, stevedores, etc., and to carry on any other businesses that may be properly carried on in connection therewith.

The Marine Department has under consideration tenders for the supply and delivery in Vancouver of a double cylinder tandem hoisting engine, winch with four hoisting drums and two winch heads, an upright steel tubular steam boiler of 30 h.p. capacity, and a structural steel derrick for the British Columbia buoy scow.

Press reports state that the C.P.R. has placed an order with the Fairfield Co., Govan, Scotland, for a new steamship for its Vancouver-Seattle service. Her dimensions are given as: length, 340 ft.; breadth, 48 ft.; depth, 18 ft., and it is stated she will be provided with two sets of four cylinder triple expansion engines and twin screws for a speed of 22 knots.

Owing to the presence of the plague in San Francisco, Cal., vessels from that port are excepted from the order of July 9, 1907, excepting certain vessels from the quarantine regulations at Canadian ports. Until further notice vessels arriving at Canadian ports from San Francisco will be dealt with in the manner prescribed in the quarantine

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie canals in Aug.:

Articles.			Canadian Canal	U.S. Canal	Total
Copper	Eastbound	Net tons	2,183	5,023	7,206
Grain	"	Bushels	2,013,409	1,109.807	3,123,216
Building stone	"	Net tons	220	....	220
Flour	"	Barrels	430,955	419,980	850,935
Iron ore	"	Net tons	1,634,828	4,486,052	6,120,880
Iron, pig	"	"	....	....	....
Lumber	"	M. ft. B.M.	8,220	91,669	99,889
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	4,865,016	2,447,813	7,312,829
General merchandise	"	Net tons	10,352	14,378	24,730
Passengers	"	Number	5,299	3,822	9,121
Coal, hard	Westbound	Net tons	37,846	166,743	204,589
Coal, soft	"	"	309,491	1,138,976	1,448,467
Flour	"	Barrels	....	....	....
Grain	"	Bushels	....	....	....
Manufactured iron	"	Net tons	19,185	28,242	47,427
Salt	"	Barrels	10,000	71,867	81,867
General merchandise	"	Net tons	62.070	72,758	134,828
Passengers	"	Number	4,004	5,794	9,798
Freight—Eastbound		Net tons	1,896,554	4,800,753	6,697,307
" Westbound		"	430,021	1,417,505	1,847,526
Total freight		"	2,326,575	6,218,258	8,544,833
Vessel passages		Number	896	2,117	3,013
Registered tonnage		Net	1,651,125	4,701,337	6,352,462

regulations established under the provisions of sec. 3, chap. 74, R.S.C.

Capt. J. W. Troup, General Superintendent C.P.R. British Columbia Coast Service, was in Montreal recently, where he had a conference with A. Piers, Manager of the C.P.R. Steamship Lines, regarding the plans and

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specifications of a new vessel similar to the Princess Victoria, for the Pacific Coast service. We are advised that reports to the effect that the proposed new boat would replace the Princess Victoria, are incorrect, the increase of business offering necessitating an additional service.

The British Columbia Government received applications to Sept. 28 for a charter for a ferry to ply between Summerland and East Summerland, Okanagan Lake, 2¾ miles. The charter will expire June 30, 1909, two trips a day each way to be made by a steamboat conforming in all respects to the requirements of the Canadian Steamboat Inspection Act. The Government will pay $250 at the expiration of every three months of satisfactory service during the continuance of the charter.

Notices to Mariners.

The Department of Marine, Ottawa, has issued the following notices to mariners:

No. 67. Aug. 2.—Quebec—New Brunswick —186. Restigouche river, aids to navigation.

No. 68. Aug. 7.—Lake Erie—187. Lake Erie, western end, Hen island, shoal northnortheastward. 188. Detroit River, Limekiln crossing, north light vessel, change of characteristic of light. 189. U.S.A.—Lake Erie, Buffalo harbor, and Niagara River, storm signal stations. 190. River St. Mary, old channel, Neebish island (Hen and Chickens), range lights re-established.

No. 69. Aug. 7.—Nova Scotia—191. South coast, Egg Island, color of gas buoy light, erratum in list of lights. 192. Newfoundland.—West coast, St. George's Bay, St. George's harbor, conspicuous objects.

No. 70. Aug. 7.—Quebec.—193. River St. Lawrence, ship channel between Quebec and Montreal, Cap Madeleine, changes in buoyage. 194. River St. Lawrence, ship channel between Quebec and Montreal, Pouillier Laforce, gas buoy established. 195. River St. Lawrence, ship channel between Quebec and Montreal, Lake St. Peter, gas buoys established.

No. 71. Aug. 8.—British Columbia.—196. Off southwest approach to Brown passage, uncharted rock. 197. Dixon entrance, Queen Charlotte Islands, dangers off Rose point.

No. 72. Aug. 9.—British Columbia.—198. Chatham sound, southern approach to Prince Rupert harbor, shoals, hydrographic notes. Alaska.—199. Stephens passage, Taku harbor entrance, Stockade point, light established. 200. Lynn canal, Chilkoot inlet, Battery point, light established.

No. 73. Aug. 7.—Ontario.—201. Canadian list of lights and fog signals, new edition. 203. Lake Erie, Port Stanley, breakwater under construction, caution.

No. 74. British Columbia.—203. Tolmie channel, Sarah Island, Boat Bluff, gas-lighted beacon established. 204. Grenville channel, Morning reef, gas-lighted beacon established.

No. 75. Quebec.—205. Saguenay River, Chicoutimi, change in light. 206. River St. Lawrence, Pilgrim shoal, gas and bell buoy changed. 207. River St. Lawrence, Beaujeu bank, gas and bell buoys changed.

No. 76. Aug. 17.—Ontario—208. Lake Ontario, Port Dalhousie, fog alarm established. 209. Lake Erie, Pelee passage, Grubb reef, gas buoy changed. 210. Lake Erie, Mouth of Detroit River, Bar point, cut gas buoy changed. 211. Lake Huron, Southampton, gas buoy established off north end of Chantry Island bank.

No. 77. Aug. 17.—Quebec—212. Chaleur Bay, Carleton, wharf and light.

No. 78. Quebec—213. Gulf of St. Lawrence, Anticosti, Heath point, tower being increased in height, temporary light.

No. 79. Aug. 23.—Ontario—214. Lake Huron, North channel, Manitoulin Island, improvements at Little Current, range lights established, and town light discontinued. 215. Lake Huron, Manitoulin Island, west end, Mississagi strait, temporary light.

No. 80. Aug. 26.—Ontario—216. Georgian Bay, west side, Cabot head, fog alarm building destroyed by fire.

Among the Express Companies.

A. C. Thorne, heretofore in the Montreal office, Dominion Ex. Co., has been appointed agent at Halifax, N.S.

Amongst the matters which will engage the attention of the Board of Railway Commissioners, shortly, is, it is reported, an enquiry into the rates charged by Express Cos., and it is regarded as probable that orders will be promulgated for substantial reductions in many cases.

W. C. Muir, heretofore Auditor of the Canadian Northern Ex. Co. at Winnipeg, has been appointed Superintendent of the same company, in charge of the territory covered by the Canadian Northern Ontario, the Canadian Northern Quebec, and the Quebec and Lake St. John Railways, and also Superintendent of the Halifax and South-Western Ry. Express Department. Office, Toronto.

Telegraph and Cable Matters.

The annual meeting of the Yale-Kootenay Telegraph Co. was held at Rossland, B.C., Sept. 11. The company is one of the Great Northern Ry. (U.S.) subsidiaries, and the directors are officials of that company. No separate report is issued.

W. C. Muir, heretofore Auditor of the Canadian Northern Express Co. at Winnipeg, Man., has been appointed Superintendent of the Canadian Northern Telegraph Co., operating on the Canadian Northern Ontario Ry. Office, Toronto.

An English paper stated recently that the British Admiralty had issued revised regulations for the use of wireless telegraph apparatus for the transmission of private messages and for the despatch of parcels to His Majesty's ships. It has been suggested that the writer responsible for the inclusion of the latter portion of the regulation is a little before his time.

It is reported that patent rights have been granted in several European countries, and also in the U.S., and a company organized, for the manufacture of glass telegraph and telephone poles; the glass being reinforced by a series of interwoven wire threads. The advantage claimed for such poles is that they are impervious alike to the ravages of insects and climatic influences.

The Dominion Deforest Wireless Telegraph Co. recently took action for libel, claiming $100,000 as damages, against the proprietors of a U.S. publication. The defendants claimed that the action should be dismissed, on the ground that their publication is not a newspaper within the meaning of the law, and that action should have been taken in the U.S., and not in Canada, but this contention was not upheld.

The C.P.R. telegraphers have applied to the Department of Labor for a board of conciliation and arbitration in their dispute with the company. J. G. O'Donoghue will represent the operators, and Wallace Nesbitt, K.C, Toronto, will appear for the company. Prof. Adam Shortt, Queen's University, Kingston, Ont., has been agreed upon as chairman, and he has had a conference with D. McNicoll, Vice-President C.P.R., and an official of the Order of Railway Telegraphers, on the subject.

G. Marconi, who arrived at Sydney, N.S., Sept. 22, stated in an interview that all the difficulties in regard to the transmission of messages across the Atlantic had been overcome, and that success was assured. It was hoped to open the station at Glace Bay about the middle of October. It is stated that the rates to be charged for messages between Glace Bay and Ireland are, for ordinary messages, 10c., and press messages 5c. a word, respectively, the land charges in each case being an additional charge.

At a meeting of the Ottawa Board of Trade, Sept. 11, Sir Sandford Fleming spoke strongly in favor of a radical method of dealing with telegraphic tolls throughout the Dominion. At the close of his remarks he moved a resolution approving the action of the council, taken in connection with the proposed chain of Empire cables, favoring the nationalization of the telegraphic service and the establishment of a state Atlantic cable, all under direct Government control, and authorizing the council to memorialize the Government in connection therewith.

It is understood that the Marconi Wireless Telegraph Co. has instituted an action against the Dominion Government, so as to determine what its standing is under the agreement with the Government. The Marconi Co. claims, under this agreement, to have the option of erecting and operating of any or all wireless telegraph stations proposed or required by the Government. The Department of Marine has been advised that there is nothing in the terms of the agreement to prevent the Crown from erecting wireless telegraph stations and equipping them with instruments other than those of the Marconi Co.

The Pacific Cable Board.

The report and accounts of the Pacific Cable Board for the year ended Mar. 31, have just been issued. The report states that the Atlantic companies afforded uninterrupted cable communication throughout the year, and a rapid and efficient service. In Canada the winter was exceptionally severe, and the C.P.R. lines in British Columbia and elsewhere suffered considerable interruption. The greater security of the lines between Vancouver and the cable station at Bamfield is a matter on which the Board is in communication with the railway companies, and it is hoped that the railway extension to Alberni will secure a safer route across the island for the telegraph lines than the present one. The accounts show a total capital expenditure to Mar. 31 last, of £1,998,460 18s. 7d., compared with £1,997,707 18s. 6d. at the same period of 1906, or an expenditure on the year of only £753 0s. 1d. The total revenue from traffic receipts (less £3,401 13s. 2d. paid to the C.P.R. and the Atlantic telegraph companies in connection with messages) was £113,000 0s. 1d., or, with interest of £516 7s. 1d., a total revenue of £113,516 7s. 2d. The amount of the Parliamentary grant was £99,487 15s. 10d., bringing the total revenue to £213,004 3s. Working expenses, including £1,425 14s. 9d. contribution to provident fund and £33,000 transferred to cable repair, reserve and general renewal fund, were £90,895 1s. 4d. Adding £77,544 18s. for the replacement of capital, the total expenses came to £168,439 19s. 4d., leaving a balance of £44,564 3s. 8d. The net message revenue was £113,000 0s. 1d., against £91,814 8s. 11d. The actual expenditures £90,895 1s. 4d., against £86,963 17s. 10d. for the previous year; showing a surplus of £22,621 5s. 10d. The sum of £77,544 18s. having to be provided for interest and sinking fund, the deficiency on the year's working was £54,923 12s. 2d., against £72,556 1s. 9d. for the previous year. This deficiency is made good by the contributing countries in the following amounts: Great Britain, £15,256 11s. 2d.; Canada, £15,256 11s. 2d.; Australia, £18,307 17s. 5d.; New Zealand, £6,102 12 s. 5d.

General Telephone Matters.

The ratepayers of Whitevale, Man., have decided to start an independent telephone system

The Nova Scotia Telephone Co. is extending its lines from Lakeville to Grafton and Somerset.

The Bell Telephone Co. has placed the central energy system in operation on its lines at Brandon, Man.

The Alberta Government has taken over the lines formerly controlled by the Alebrta Telephone Co.

The Independent Telephone Co. has installed its telephones at Pickering Station, Ont., on the G.T.R.

It is reported that the Bellechasse Telephone Co. of Quebec proposes to instal an automatic telephone system shortly.

A telephone system has been installed at Hopewell Cape, N.S., and a connection is given with the long distance lines of the province.

It is understood that a company will be incorporated shortly to construct and operate telephone lines in the townships of Blenheim and Burford, Ont.

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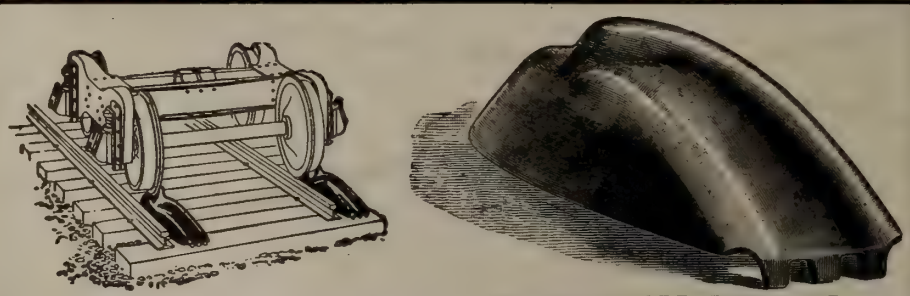

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The Niagara District Telephone Co. has completed its telephone lines to Beamsville, Ont., and is commencing construction of an extension to Silverdale.

The Cornwallis, Man., Council is discussing a proposal to construct a telephone system which, when completed, will be connected with the Government system.

The ratepayers of Milton, Brampton and Acton, Ont., are discussing the advisability of promoting an independent telephone system in each of their respective townships.

The report for the year recently closed of the civic telephone system of Edmonton, Alta., shows a surplus of $7,495. The number of instruments in use during the year was 727.

The Independent Telephone Co. of Caledonia, Ont., has made considerable progress towards the completion of its system, which it hoped to have working at the end of September.

The Tisdale Telephone Co. has been incorporated with offices at Tisdale, Sask., under the provisions of the Northwest Territories ordinance respecting joint stock companies.

The joint councils of Virden and Wallace, Man., as the result of recent meetings, have decided on the installation of telephones on the system adopted by the Manitoba Government.

The Bell Telephone Co. has erected the first of its branch exchanges in Winnipeg. It is two stories high and constructed of brick and steel. It is expected to have it opened for business in October.

The following have been elected officers of the Fort Seneca, B.C., Mutual Telephone Co.: President, L. C. Umsted; Vice-President, W. C Rosenberger; Secretary, I. S. Edwards; Treasurer, F. Edwards.

The contracts relating to the erection of the proposed telephone exchange building, and the construction of the subways, at Brandon, Man., are to be placed shortly, and it is hoped that the work will be commenced this fall.

The Sechelt Brick and Tile Co., Ltd., and the British Columbia Cedar Lumber Co., Ltd., recently incorporated under the British Columbia Companies' Acts, have power, among other things, to construct telephone lines on their properties.

The following have been elected officers of the Blenheim and South Kent Telephone Co., Blenheim, Ont.: President, C. D. Laneferd; Vice-President, N. Watson; Directors, T. L. Pardon, W. J. Huffman, J. Rutherford; Secretary-Treasurer, G. Taylor.

R. L. Borden, leader of the Opposition in the House of Commons, in a recent speech advocated "the establishment, after due investigation, of a system of national telegraphs and telephones under conditions which shall be just to capital already invested in those enterprises."

A telephone line is being strung between Sackville and Cape Tormentine, N.B. The work, it is expected, will be completed early in Oct. When the line is finished there will be a trunk line, metallic circuit, between Sackville and Port Elgin, a local line to Jolicure, and another to Point de Bute.

The Premier of Saskatchewan stated recently that his Government would follow the lead given by the Governments of Manitoba and Alberta, in the establishment of a state-owned telephone system. The services of an expert have been engaged to investigate and report as to the best system to be adopted and the possibilities of a state-owned system throughout the province.

Recent reports as to the progress of construction upon the Government telephone lines in Alberta, show that the stringing of the wires on the Lacombe-Stetler line has been completed, and the Stetler-Daysland line was expected to be finished by the end of Sept. Eighty miles of the Macleod-Blairmore line have been completed, and a rural line from Vegreville north is under construction. The equipment of exchanges and the installation of instruments is being proceeded with as fast as possible. At Fort Saskatchewan the equipment is being standardized and a metallic circuit put up. The standardization of the exchange at Blairmore, taken over from a private company, has been completed.

The report of the commissioners appointed to investigate the dispute between the Bell Telephone Co. and its Toronto operators, was issued Sept. 12. The finding generally upholds the position assumed by the operators, and recommends that a commission of medical experts should be appointed to further consider the matter. Amongst other recommendations and suggestions are: A 6-hour day spread over about 8 hours; one day in the week as holiday; overtime to be prohibited; age limit at which girls are to be employed to be fixed at 18; medical examination of operators before engagement; the extension of the criminal law regarding listeners; and the appointment of a permanent Board of Conciliation, composed of officials and operators.

The second annual convention of the Canadian Independent Telephone Association took place in Toronto Sept. 4, under the presidency of A. Hoover, Green River, Ont. The morning session was principally concerned with the Secretary's report, election of officers, and other details of organization. At the afternoon meeting a number of resolutions were brought forward and discussed dealing chiefly with the position of independent telephone companies as regards other telephone companies, under the Railway Acts, exclusive contracts, public ownership, etc. The following officers were elected for the current year: President, J. F. Demers, Levis, Que.; Vice-Pr sident, W. Doan, Harrietsville, Ont.; Secretary-Treasurer, F. P. Wilson, Toronto.

The Manitoba Government has let a contract to J. M. and J. J. Kelly, Winnipeg, for the erection and equipment of a building in the city for use as a telephone exchange. The contract price is $97,172, and includes everything except plumbing and heating. A contract for the construction of 15 miles of subways and 100 miles of duct feeds in the city in connection with the telephone system has been let to Stone and Green, Minneapolis, Minn., at a minimum of $83,000. This will form a perfect network of conduits around the city. Very few of the wires will be laid on Main St. From Graham Ave. to the city hall will be the extent. Then on Portage Ave. the conduits will commence at Colony St. and run west as far as Burnell St. The principal cable will be laid on McDermott St.; but Notre Dame is exempt. A crossing under the C.P.R. tracks will be effected at King St. A line will run along Higgins Ave. as far as Louise Bridge; another will run along Charlotte and Hargrave streets to a lane south of Broadway; another up Logan to Nena; one up Sargent St. as far as Beverly; another along Osborne St. and Pembina Ave. as far as Fleet St. Branches from this later line will supply the residents of Fort Rouge. Beside these underground lines, the provincial telephone department will in all probability erect pole lines in different parts of the city.

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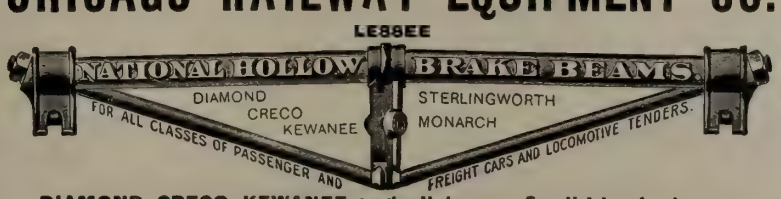

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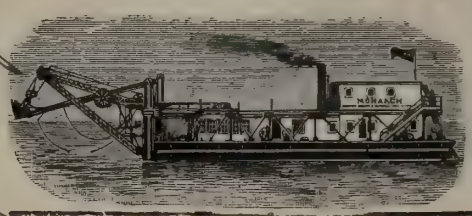

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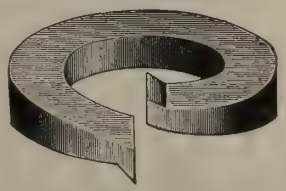

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Montreal Steel Works.....Montreal.

Iron and Steel Bars
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.

Iron, Bar
Homer Taylor.....Montreal.

Iron, Pig
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.

Iron Signs
Acton Burrows Limited.....Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co.....Brockville, Ont.

Japans
McCaskill, Dougall & Co.....Montreal.

Journal Bearings
Canada Foundry Co.....Toronto.
Canadian Bronze Co.....Montreal.
Crossen Car Mfg. Co.....Cobourg Ont.
Kerr Engine Co.....Walkerville, Ont.
Jas W. Pyke & Co.....Montreal.
St. Thomas Brass Co.....St. Thomas, Ont.

Journal Boxes
Chicago Pneumatic Tool Co.....Chicago, Ill.
McCord & Co.....Chicago, Ill.

Kalsomine Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Lager Beer, &c.
E. L. Drewry.....Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co.....Hamilton, Ont.

Lamps and Lanterns
The Hudson's Bay Company.....
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co.....Toronto.

Launches
Polson Iron Works.....Toronto.

Lights, Contractors' and Wrecking
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Locomotive Lagging and Covering
Canadian Fairbanks Co.....Montreal
Homer Taylor.....Montreal.

Locomotives (Compressed Air)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co of Montreal.
H. K. Porter Co.....Pittsburg, Pa

Locomotives (Electric)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont.

Locomotives (Rack)
Burnham, Williams & Co.....Philadelphia, Pa.
Canadian Locomotive Co.....Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Canadian Locomotive Co.....Kingston, Ont.
J. T. Gardner.....Chicago, Ill.
The W. H Kelson Co.....Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co.....Pittsburg, Pa.
Vulcan Iron Works.....Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.
Flannery Bolt Co.....Pittsburg, Pa.

Lubricators
McCord & Co.....Chicago, Ill.
Homer Taylor.....Montreal.

Machine Tools
W. Abbott.....Montreal.
Canadian Fairbanks Co.....Montreal.

Machinery, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery, Power
Jno. McDougall,Caledonian IronWorks Co.Montreal

Machinery Repairs, Marine
Sheriffs Mfg. Co.....Milwaukee, Wis.

Machinery Special
Miller Bros. & Toms.....Montreal.

Machinery, Transmission
Miller Bros. & Toms.....Montreal.

Manganese Steel Castings
Montreal Steel Works.....Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

Milling Cutters
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.

Motors
McCord & Co.....Chicago, Ill.

Motors (Air)
Independent Pneumatic Tool Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co.....Newark N.J.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal.

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tanks
S. F. Bowser & Co., Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto.

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
Chicago Pneumatic Tool Co.....Chicago, Ill.
Independent Pneumatic Tool Co....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Limited.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H. Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
Mussens Limited.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Rammers, Sand
Chicago Pneumatic Tool Co.....Chicago, Ill.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Mach nes
Independent Pneumatic Tool Co....Chicago, Ill.

Receivers, Air
Chicago Pneumatic Tool Co.....Chicago, Ill.

Recorders, Speed
Chicago Pneumatic Tool Co.....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkeville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scrapers (Wheel and Drag)
Bechtels Limited.....Waterloo, Ont.
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.

Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal.

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Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
Mussens Limited.....Montreal.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co. Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Valves, Angle
Golden-Anderson Valve SpecialtyCo. Pittsburg,Pa.

Valves, Automatic Float
Golden-Anderson Valve SpecialtyCo., Pittsburg,Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Valves, Cushioned, non-return
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Reducing
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Columns
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa.

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa.

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
Mussens Limited.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Wrecking Cranes
Mussens Limited.....Montreal.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

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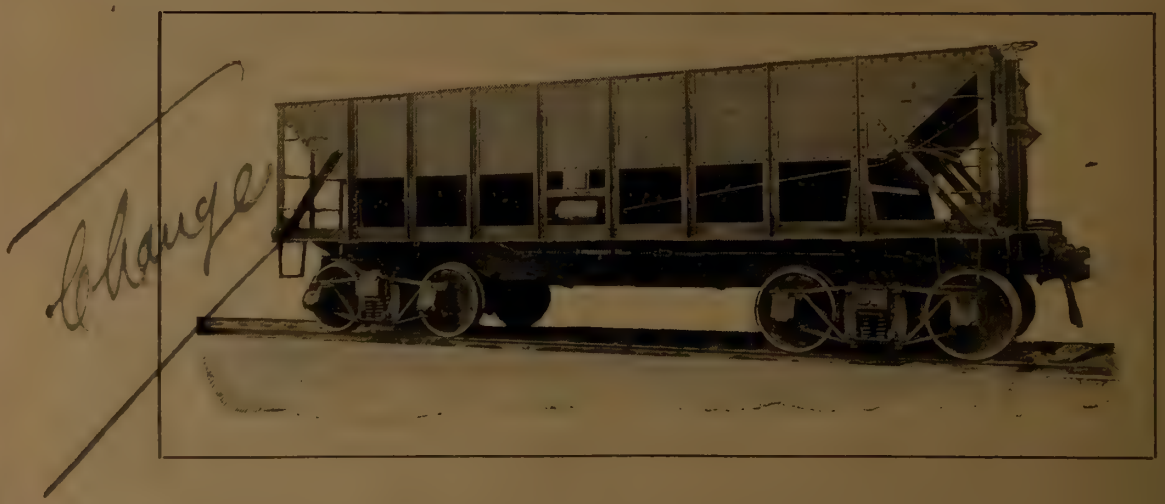

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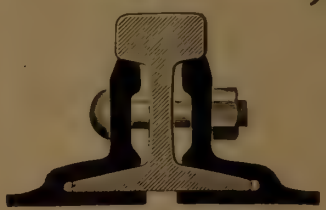

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Koksoak R.
Cape St. John
Nore Dane bay
Twillingate
Fogo I.
Hamilton Sound
Cape Freels
Bonavista Bay
Cape Bonavista
Bonavista
Trinity bay
Cape Race
Conception Bay
Cape Francis
ST. JOHNS
Holyrood
Brigus
Whitburne
Placentia Jc.
Torbay
Ferryland
Cape Race
Grand Lake
Quirpon I.
Musgrave Harbour
Bay of Islands
Lake Melville
Victoria R.
Hare Bay
Tilt Cove
Hermitage bay
Fortune Bay
Cape St. Mary
St. Mary Bay
Cape Pine
St. Pierre I. (Fr.)
NEWFOUNDLAND

See Purchasing Agents' Guide on page 869

See Alphabetical Index to Advertisements on page 833.

THE

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Old Series, No. 199.
New Series, No. 117

TORONTO, CANADA, NOVEMBER, 1907.

For Subscription Rates, See page 833.

C.P.R. Annual Meeting.

At the annual meeting in Montreal Oct. 2, Sir Wm. Van Horne, Chairman of the Board, presided. The President, Sir Thos. G. Shaughnessy, in moving the adoption of the report for the year ended June 30, which was published in our last issue, said:

The twenty-sixth annual report of the company, which I have the honor, on behalf of the directors, to submit for your approval, shows an increase in your gross revenue from traffic of more than eleven million dollars for the year, but the effect of an unusually severe winter and of the enhanced cost of labor and material is shown in the increased ratio of working expenses to income

You will have noticed by the statements included in the report that the works of improvement on different sections of your system, necessary to facilitate the handling of your traffic, have been vigorously prosecuted, and that the outlay for additional cars and locomotives was particularly large. I may add that since the close of the fiscal year there has been no change in the policy of your directors with reference to these matters; indeed, unless the business of the country has a serious and prolonged setback, and there are no present grounds for such an apprehension, circumstances will make it necessary to continue these expenditures year by year, but it may be on a somewhat reduced scale. To provide the requisite means, your directors will, at a future date, ask you to sanction the issue of the balance of the ordinary share capital authorized, as and when required, but there are sufficient funds on hand to meet all immediate requirements.

In Ontario, although the yield of wheat was satisfactory, the season has not been an auspicious one for other crops, and in Western Canada, where you are more largely interested, the very backward spring has resulted in a shrinkage of probably 25% in the quantity of marketable wheat as compared with last autumn. There will, however, be a very considerable increase in the quantity of oats and other grains, so that, with the higher price of wheat, the farmers of Western Canada will receive in the aggregate quite as much for their produce as they did last year.

Because of the late harvest and the consequent delay in the movement of grain, we carried to the ports on Lake Superior during the month of September only 1,381 carloads, as against 4,898 carloads in September, 1906, but notwithstanding this large falling off in that particular class of traffic, your comparative weekly earnings have thus far shown no diminution, and we anticipate an extraordinary rush of grain to the head of Lake Superior before the close of navigation.

While the comments on the report in financial papers are generally complimentary, my attention has been called to one or two articles in which it is suggested that the directors should bring before the shareholders the tangible value of the company's land assets. It is not easy to do this with any degree of accuracy, but it may be fairly assumed that, in the case of your agricultural lands, as sales are made and the area decreases, the value of the remaining lands will be enhanced, and, as a consequence, the 8,900,000 acres of the original grant still unsold will yield on the average a price per acre considerably higher than has heretofore been realized, without in any manner obstructing settlement or depriving your company of the traffic advantages resulting from the cultivation of lands tributary to your lines.

W. C. HUNTER.
Manager New Brunswick Coal and Railway Co.

Your lands in British Columbia are of a different character, their main value being in the standing timber and the possibility of large coal deposits, although there are some areas in the valleys suitable for cultivation. During the last couple of years a considerable demand has sprung up for these lands and the timber, and ultimately they will yield a handsome return.

By the end of the present season 361 miles of canals and ditches will have been completed in the western section of the irrigation block, sufficient to give water to approximately 210,000 acres out of a total of 350,000 acres to be served in that section, and the ultimate cost of the work, which should be finished next year, will be in the neighborhood of $6.50 per acre, including the expenditure on the main canal, which will be available for the central and eastern sections as well. While this expenditure gives a largely increased value to the irrigated lands themselves, the adjoining areas greater in extent, but that are above the ditches and cannot therefore be served by water, are being made available, and are now selling at prices considerably above the average of your sales. Thus your directors confidently believe that not only will your investment in the irrigation canals and ditches be profitable, but that a large tract of territory along your main line east of Calgary, that by reason of the uncertainty of the rainfall would otherwise have remained bleak and uncultivated, will be converted into a pleasing and productive district.

Your steamship lines on both the Atlantic and Pacific oceans have not only been directly profitable, but they are very substantial contributors to the revenue of the railways by bringing to it traffic that could not otherwise be secured.

It may be interesting to the shareholders to know that with the exception of the discount on the original sixty-five million dollars of common stock sold nearly twenty-five years ago, when few people had faith in the ultimate success of the enterprise, the aggregate of all the capital stock and securities of other descriptions appearing in the balance sheet has yielded to your treasury cash in excess of their face value. Government and municipal subsidies, whether in the shape of constructed railway lines or money, and the proceeds of the land sales expended on the property, amounting in the aggregate to more than one hundred million dollars, have never been capitalized, nor are they included in the balance sheet item, "railway and equipment."

As indicating how widespread is the interest in your property and the confidence in your stock that prevails with investors in Great Britain, on the continent and elsewhere, I might mention that when the books closed for the October dividend there were 11,203 ordinary shareholders whose respective holdings were fifty shares or less, and from information received through

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CHARLES MILLER,

PRESIDENT.

banking and security organizations, whose own certificates are outstanding against stock held in trust for clients, I estimate that there are 3,000 other investors of the same class, making in all upwards of 14,000 people whose individual holdings do not exceed fifty shares. Hence it would appear that practically one-third of your entire ordinary share capital is held by these small investors.

There are now in the service of the company quite 74,000 officers and employes, with a monthly pay-roll of $3,700,000, and of the whole number of employes I am safe in saying that 70,000 are located in Canada. Estimated on the ordinary basis of five persons to a family, these would represent 350,000 souls, or more than one-twentieth of the entire population of the Dominion, and if there be added the men in rail and rolling mills, lumber mills, car and locomotive manufactories, and other industrial establishments who are engaged in the manufacture of material in large quantities for the purposes of the company, I should say that one-fifteenth, if not one-twelfth, of the people of the country directly or indirectly receive their income from the company.

The dividend from land interest account will be the same in the current year as it was in the last, namely, one per cent. in nwo semi-annual instalments of ½% each.

The resolution adopting the report was seconded by R. B. Angus and agreed to.

Resolutions were then unanimously passed:

Authorizing the signing of a lease of the St. Mary's and Western Ry., when constructed, from St. Mary's to a connection at or near Embro, Ont., with the proposed extension of the Tillsonburg, Lake Erie and Pacific Ry., already leased by the C.P.R., a distance of 15¼ miles, for a term of 99 years on a basis of a rental of 40% of the gross earnings as defined in the lease, with a minimum rental of $7,930 a year, which represents 4% on $198,250 first mortgage bonds of the St. M. and W. Ry., at the rate of $13,000 a mile, and with an option in favor of the C.P.R. to purchase the whole of the capital stock of the St. M and W. Ry. at any time within twelve years for the sum of $25,000.

Approving an agreement made with the directors of the Northern Colonization Ry. for the construction of that company's railway from Nominingue to Rapide de L'Orignal, Que., about 34 miles; and authorizing the directors to acquire the bonds issued or to be issued in respect of such extension, the interest thereon at 4% being guaranteed by the C.P.R., the total bond issue not to exceed $20,000 a mile of such extension; the directors being also authorized to issue its consolidated debenture stock for the purpose of acquiring the said bonds.

Authorizing the directors to issue and dispose of 4% consolidated debenture stock not exceeding in the aggregate $40,000 a mile, being an amount of $10,000 a mile in addition to the amount previously authorized to be issued in respect of the construction of the Bolton-Sudbury branch. The original resolution was passed Oct. 5, 1904, and authorized the issue of consolidated debenture stock at the rate of $30,000 a mile in respect of the branch of 226 miles. Owing to the difficult character of the country through which the line is being constructed and the increased cost of labor and materials, parliamentary sanction was obtained to issue stock to the extent of $40,000 a mile, which the resolution of the shareholders now authorizes to be issued.

Authorizing the directors to make such arrangements and contracts as they may deem advisable, and at such time and times as they may deem expedient, for the purpose of meeting the requirements of the company's Pacific Ocean trade by providing a faster and more frequent service, and, with that object in view, to acquire by purchase or construction two additional steamships and equipment, or to transfer the steamships Empress of Britain and Empress of Ireland from the Atlantic to the Pacific service, and in the event of such transfer to make such arrangements and contracts as they may deem advisable, and at such time and times as they may deem expedient, for the acquisition by purchase or construction of two larger and faster steamships and equipment to take the places of the two so transferred, and to incur such capital expenditure as may be necessary to give effect to this resolution.

Authorizing the extension of the Moose Jaw Branch, now under construction for 50 miles, for a further distance of 100 miles in a northwesterly direction, and the construction of a branch line from Regina to a point in the vicinity of Saskatoon, Sask., 165 miles, whenever it is deemed advisable to do so; and authorizing the directors to issue consolidated debenture stock not exceeding in the aggregate £4,000 a mile.

Authorizing the issue of consolidated debenture stock for the construction and equipment of the new lake steamers Assiniboia and Keewatin, at a cost of £180,000, and of a new steamer of the Princess type for the Victoria-Seattle run, at a cost of £125 000, the total issue of stock to be £305,000.

On the motion of Sir G. A. Drummond, seconded by W. D. Matthews, the by-law respecting the executive committee was amended by increasing the membership from four to five.

The retiring directors, R. B. Angus, Hon. L. J. Forget, E. B. Osler, M.P., and Sir Wm. Van Horne were re-elected for a further period of four years.

On motion of W. H. Evans, seconded by G. W. R. Notman, a resolution thanking the directors and officers for their services was passed.

After the meeting adjourned the directors met and elected the following officers: Chairman of the Board, Sir Wm. Van Horne; President of the company, Sir T. G. Shaughnessy; Vice-President, D. McNicoll; Executive Committee: Sir Wm. Van Horne, Lord Strathcona, R. B. Angus, E. B. Osler, Sir T. G. Shaughnessy, D. McNicoll.

An application will be made at the forthcoming session of the British Columbia Legislative Assembly, for an act to incorporate a company with power to build, equip, maintain and operate a line or lines of railway of standard gauge from a point at or near Port Simpson or Work Channel, in the Coast District by the most feasible and practicable route to a point in the eastern boundary of the Province, via the southwest side of Work channel to the Skeena river, thence up the north side of the Skeena river to a point near Hazleton, from there to the junction of the Bulkley River and up its right bank for eight miles to the Suskewa River, following this river by a low divide to the head of Babine Lake, thence north to McLeod Lake and to the Misnichinca River, passing alongside this river by Summit Lake to Pine River Pass, and northwesterly to the head of Pine River, down its course to Moberly Lake, and thence by the Peace River to the easterly boundary of the Province. Power will also be sought to construct branches from the proposed main line, not exceeding in any one case fifty miles in length, and also to construct or acquire wharves, docks, steam or other vessels, telegraph and telephone lines, to transmit messages for commercial purposes and to collect tolls therefor.

November Birthdays.

Many happy returns of the day to

A. B. Atwater, Assistant to the 2nd Vice-President and General Manager G.T.R., for lines west of Detroit and St. Clair rivers, Detroit, Mich., born at Sheffield, Ohio, Nov., 1845.

W. F. Brougham, Local Right-of-Way and Lease Agent C.P.R., Vancouver, B.C., born in Westmoreland, Eng., Nov. 25, 1865.

G. B. Burchell, General Manager Canada Coal and Ry. Co., Joggins Mines, N.S., born at Sydney, N.S., Nov. 1, 1877.

M. J. Butler, Deputy Minister of Railways and Canals, Ottawa, born at Deseronto, Ont., Nov. 19, 1856.

J. R. Cameron, Superintendent District 1, Canadian Northern Ry., Port Arthur, Ont., born at Truro, N.S., Nov. 5, 1865.

F. Conway, Acting General Superintendent Kingston and Pembroke Ry., Kingston, Ont., born at Ernestown, Ont., Nov. 19, 1850.

C. W. Cooper, Assistant General Passenger Agent, Canadian Northern Ry., Winnipeg, Man., born at Montreal, Que., Nov. 16, 1868.

W. L. Creighton, Advertising Agent Intercolonial Ry., Moncton, N.B., born at Derby, Eng., Nov. 9, 1871.

W. Downie, General Superintendent C.P.R. Atlantic Division, St. John, N.B., born at Rock Currie, Ireland, Nov. 12, 1850.

L. Drago, Canadian Passenger Agent, New York Central Rd., Toronto, born in Raleigh Tp., Kent County, Ont., Nov. 7, 1860.

C. Drinkwater, Secretary and Assistant to the President, C.P.R., Montreal, born at Ashton-under-Lyne, Eng., Nov. 17, 1843.

Jos. Dubrule, Jr., Manager Canadian Pacific Car and Passenger Transfer Co., Prescott, Ont., born at Spencerville, Ont., Nov. 14, 1872.

F. W. Flanagan, General Passenger Agent C.P.R., London, Eng., born at Kingston, County Dublin, Ireland, Nov. 23, 1862.

C. R. Hosmer, director C.P.R., born at Coteau Landing, Que., Nov. 12, 1851.

J. McGillivray, Superintendent Inverness Ry. and Coal Co.'s lines, Inverness, N.S., born at Nairn, Scotland, Nov. 13, 1867.

C. Murphy, Superintendent C.P.R., London, Ont., born Nov. 20, 1865.

F. Nicholls, President Niagara, St. Catharines and Toronto Ry., director Canadian Northern Ry., born in England, Nov. 23, 1856.

P. A. Peterson, Chief Engineer Guelph and Goderich Ry., Goderich, Ont., born at Niagara Falls, Ont., Nov., 1839.

H. J. Pettypiece, C.P.R. ticket agent, Forest, Ont., born near Amherstburg, Ont., Nov. 11, 1855.

J Rennie, Master Mechanic Caraquet Ry., Bathurst, N.B., born at St. John, N.B., Nov. 1, 1858.

W. G. Roche, contracting freight agent Canadian Pacific Despatch, Detroit, Mich., born Nov 3, 1877.

J. D. Rowe, Treasurer Central Ontario Ry. at Trenton, Ont., born at Ameliasburg, Ont., Nov. 7, 1864.

H. P. Sharpe, General Agent Dominion Express Co., Toronto, born at Brockville, Ont., Nov. 24, 1864.

G. H. Shaw, Traffic Manager Canadian Northern Ry., Winnipeg, Man., born at Smith's Falls. Ont., Nov. 25, 1859

F. M. Spaidal, Superintendent Canadian Northern Ontario Ry., Toronto, born at Gananoque, Ont., Nov. 13, 1858.

J. Sparks, Assistant General Baggage Agent C.P.R. Western Lines, Winnipeg, Man., born in London, Eng., Nov. 25, 1874.

H. P. Timmerman, General Superintendent C.P.R., Eastern Division, Montreal, born at Odessa, Ont., Nov. 6, 1856.

Arthur White, ex-Division Freight Agent G.T.R., at Toronto, born at Hadleigh, Suffolk, Eng., Nov. 17, 1840.

H E. Whittenberger, Superintendent Eastern Division G.T.R., Montreal, born at Peru, Ind., Nov. 9, 1864.

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Orders by the Railway Commissioners.

3436. Sept. 30—Authorizing G.T. Pacific Ry. Co. to construct its railway across certain highways from the west line of township 12, r. 12, w. of principal meridian, to the east line of section 4, township 12, range 8, w. of meridian, District of Portage la Prairie, Man.

3547 to 3554. Sept. 4—Bell Telephone Co. crossings various railways.

3555. Sept. 4—Authorizing Consumers Gas Co., Toronto, to lay main under C.P.R. tracks at Front and Beachell Sts., Toronto.

3556. Sept. 4—Authorizing the Village of Elmira, Ont., to lay a water main under G.T.R. tracks.

3557. Sept. 3—Authorizing A. L. Young, of Dunnville, Ont., to lay a gas main under G.T.R. tracks.

3558. Sept. 5—Approving location of Niagara, St. Catharines and Toronto Ry. from Thorold township to Brantford, Ont.

3559. Sept. 5—Authorizing G.T.R. to construct a branch line to W. Sutton's premises, Simcoe, Ont.

3560-3561. Sept. 4—Authorizing Canadian Northern Quebec Ry. to construct bridges over Belle Isle River, mileage 45.5 west from Quebec Bridge, and over River aux Pommes, mileage 27.3 west from Quebec Bridge, on its Garneau-Quebec division.

3562. Sept. 5—Authorizing Consumers Gas Co. to lay a pipe under G.T.R. tracks at Eastern Ave., Toronto.

3563. Sept. 5—Extending time in order of May 28, 1907, to Nov. 30, 1907, authorizing Canadian Northern Quebec Ry. to use, for construction purposes only, the crossing of its tracks with those of the C.P.R., near Lachevrotiere, Que., mileage 48.4 west from Quebec bridge..

3564. Sept. 5—Approving Alberta Ry. and Irrigation Co.'s Standard Freight Tariff C.R.C. 95, cancelling Standard Freight Tariff C.R.C. 1.

3565. Sept. 6—Bell Telephone Co. crossing of Michigan Central Ry. at Venison Ave., Tillsonburg, Ont.

3566. Sept. 10—Authorizing Brandon, Saskatchewan and Hudson's Bay Ry. to operate its branch line and connect its track with C.P.R. track between 18th and 26th Sts., Brandon, Man.

3567. Sept. 10—Authorizing Crow's Nest Southern Ry. to cross C.P.R. spur on its Crow's Nest branch, near Hosmer, B.C.

3568. Sept. 10—Authorizing Central Ontario Ry. to open for traffic its line from 1½ miles north of Bancroft Station to Maynooth, Ont., 14½ miles.

3569. Sept. 10—Authorizing Wilson Carbide Co. to carry three overhead electric transmission wires across G.T.R. tracks at Merritton, Ont., and to locate upon the G.T.R. lands two poles.

3570. Sept. 10—Authorizing Provincial Light, Heat and Power Co. to erect a 44,000 volt transmission line over the Montreal Park and Island Ry. on lot 138, near Montreal West, Que.

3571. Sept. 7—Authorizing Brandon, Saskatchewan and Hudson's Bay Ry. to operate its trains over, upon and through the Canadian Northern Ry. tracks at Minto, Man.

3572 and 3573. Sept. 7—Authorizing Brandon, Saskatchewan and Hudson's Bay Ry. Co. to operate its trains over, upon, and through the C.P.R. tracks near Carroll, Man., and in Boissevain, Man.

3574. Sept. 10—Approving location of Canadian Northern Ontario Ry. through tp. of Hope, Ont., mileage 177 to 188, west from Ottawa.

3575 to 3589. Sept. 13—Authorizing New Brunswick Telephone Co. to place its wires over C.P.R. tracks at various points.

3590. Sept. 17—Authorizing Brougham and Grattan Telephone Co. to carry wires over C.P.R. tracks at or near Douglas Station, Ont.

3591. Sept. 17—Authorizing Brougham and Grattan Telephone Co. to carry wires over G.T.R. tracks at four points in Renfrew County, Ont.

3592. Sept. 17—Amending order 3562 granting leave to the Consumers Gas Co. of Toronto to lay a gas pipe under G.T.R. tracks at Eastern Ave., Toronto.

3593. Sept. 17—Approving book of reference 4 to be used in connection with plan and profile of deviation and grade improvement of G.T.R. between St. Lambert and Ste. Rosalie Jct., Que.

3594. Sept. 13—Authorizing the City of St. Thomas, Ont., to lay a gas pipe under G.T.R. tracks.

3595. Sep. 10—Extending time within which G.T.R. may install an interlocking and derailing plant at the crossing of the G.T.R. and C.P.R. in Yarmouth tp., Ont., as provided by order 3046.

3596. Sept. 6—Authorizing Kaministiquia Power Co. to carry transmission wires over Canadian Northern Ry. tracks at West Fort William, Ont.

3597. Sept. 10—Authorizing G.T.R. to construct a branch line to Dowswell Mfg. Co.'s premises, Hamilton, Ont.

3598. Sept. 13—Authorizing Kaministiquia Power Co. to cross C.P.R. lines in Fort William, Ont.

3599. Aug. 27—Authorizing Northern Extension Ry. to carry its tracks across C.P.R. tracks (Manitoba and Northwestern branch) near Westbourne, Man.

3600. Sept. 19—Authorizing C.P.R. to open for traffic that portion of its main line known as the "Antelope Diversion," mileage 26 to 23.8.

3601. Sept. 18—Approving location of Canadian Northern Ry. through tps. 33-34, ranges 30-33, west prin. mer., and ranges 1-2, west second meridian, Saskatchewan.

3602 to 3605. Sept. 18—Authorizing Bell Telephone Co. to carry its wires over C.P.R. tracks at various points in Manitoba and Saskatchewan.

3606. Sept. 20—Authorizing C.P.R. to expropriate certain lands additional to those it now occupies in Three Rivers, Que.

3607. Sept. 20.—Authorizing C.P.R. to construct a spur line to J. A. Jamieson's premises, Grattan tp., Ont.

3608. Sept. 20—Authorizing C.P.R. to construct certain spur lines in Calgary, Alta.

3609. Sept. 20—Authorizing G.T.R. to construct and operate an additional track across East Main St., Welland, Ont.

3610. Sept. 20—Authorizing Canadian Northern Ontario Ry. Co. to operate a branch line from its main line as located across lot 12, con. F, tp. of Medora, to the shore of Lake Joseph, Muskoka district, Ont.

3611. Sept. 20—Approving revised location of G.T. Pacific Ry. through unsurveyed territory, North Alberta, mileage 83.00 to 119.635.

3612. Sept. 20—Authorizing G.T.R. to construct and operate a spur line to Argue, McColl & Son's premises, Ottawa, Ont.

3613. Sept. 20—Authorizing C.P.R. to construct spur line to East Kootenay Lumber Co.'s premises, East Kootenay district, B.C.

3614,-3615. Sept. 24—Authorizing Windsor, Essex and Lake Shore Rapid Ry. to open for carriage of traffic the portions of its line where it crosses the Pere Marquette Rd. at Pelton and Kingsville, Ont.

3616. Sept. 24—Authorizing Chatham, Wallaceburg and Lake Erie Ry. to open for traffic that portion of its railway from the south side of the G.T.R. main line at Chatham to the north side of the Michigan Central Ry. track at Charing Cross, Ont.

3617. Sept. 23—Cancelling clause j in order of July 6, 1907, and substituting therefor the following: "(j) That the rates from Canadian points on the Detroit and St. Clair River frontier to all points east to the Atlantic and north to the Ottawa River, shall in no case exceed the rates from Detroit and Port Huron." (This clause in its amended form was given in our Aug. issue, pg. 567, for which see the whole order.)

3618. Sept. 21—Authorizing A. F. Dillinger, Operating Assistant to the Chief Traffic Officer, to make inquiry and report to the Board re G.T.R. Co.'s equipment.

3619. Sept. 25—Extending time for one week from Sept. 28, 1907, subject to terms in original order of Aug. 6, 1906, authorizing C. N. Ontario Ry. to use for construction trains only the crossing of its tracks by the C.P.R. near Wahnapitae station, Ont.

3620. Sept. 26—Authorizing C.N.R. to place a diamond in the C.P.R. Wolesley-Reston branch in sec. 7, tp. 14, r. 7, west second mer.; and to operate its trains over such diamond and track for construction purposes until further order.

3621. Sept. 25—Authorizing C. N. Ontario Ry. to open for traffic the portion of its line from Parry Sound to Still River, Ont., mileage 0 to 44.3, subject to the condition that the speed of the trains shall not exceed 20 miles an hour.

3622. Sept. 26—Authorizing Manufacturers Natural Gas Co. to lay a gas pipe over G.T.R. tracks at Catherine St., Hamilton, Ont.

3623 to 3635. Sept. 26—Authorizing C.P.R. to construct spur lines from the Great West Development Co.'s spur to P. Lyall & Sons, Wilton Bros., McDonald, Dure Lumber Co., A. Black Lumber Co., Menzies & McIntyre, Robinson & Co., Dobson & Jackson, McLelland Lumber Co., D. E. Adams, R. Watson & Co., J. B. Hughes Lumber & Fuel Co., and T. Black's premises, Winnipeg, Man.

3636. Sept. 25—Authorizing Erie Telephone Co. to carry its wires across G.T.R. tracks at Nelles Corners, Ont.

3637 and 3638. Sept. 26—Authorizing Vancouver, Victoria and Eastern Ry. to construct its line between Abbottsford and Huntingdon over Riverside road and Farmer Highway, New Westminster District, B.C.

3639. Sept. 26—Approving revised location of G.T. Pacific Ry. from n.w. ¼ sec. 18, tp. 45, r. 7, west, to s.e. ¼ sec. 15, tp. 45, r. 8, west 4th mer., North Alberta, mileage 102.68 to 1.978.

3640. Sept. 26—Authorizing I. A. Sproul to lay a water pipe under C.P.R. tracks in Amaranth tp., Ont.

3641. Sept. 26—Authorizing Toronto, Hamilton and Buffalo Ry. to cross Newport and East Newport Sts., Brantford, Ont., with a branch line from a point on its line to a connection with its track in lot Q.

3642. Sept. 26—Authorizing R. E. Edgar to place a telephone wire across C.P.R. track in Amaranth tp., Ont.

3643. Sept. 20—Authorizing J. Morgan to lay a water pipe under G.T.R. tracks in Lambton tp., Ont.

3644. Sept. 26—Authorizing Ontario Iron and Steel Co. to lay a gas pipe under G.T.R. tracks in Humberstone tp., Ont.

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3645. Sept. 26—Authorizing C.P.R. to construct a spur line from the Great West Development Co.'s spur to Harstone Bros.' premises, Winnipeg. Man.

3646 to 3654. Sept. 27—Approving of location of G.T. Pacific Ry. stations.

3655. Sept. 27—Authorizing Bell Telephone Co. to place wires across G.T.R. tracks near Richmond Hill, Ont.

3656. Sept. 27—Authorizing Malahide and Bayham Telephone Co. to place wires across C.P.R. tracks near corporated Straffordville, Ont.

3657. Sept. 27—Authorizing C.N. Quebec Ry. to construct a bridge over the Riviere du Nord, at St. Jerome North, Que.

3658. Sept. 30—Authorizing G.T. Pacific Ry. to construct its line across certain highways, from 35 miles west of to 85 miles west of Portage la Prairie, Man.

3659. Oct. 2—Authorizing C.P.R. to open for carriage of traffic that portion of its line from Strassburg to Nokomis, Pheasant Hills branch, Sask.

3660. Oct. 2—Authorizing C.N. Ontario Ry. to construct a branch line to the Mond Nickel Co.'s mines, tp. of Garson, Ont., extending from a point on the Hutton branch, 1.14 miles north of Sudbury, Ont.

3661. Oct. 2—Authorizing Windsor, Essex & Lake Shore Rapid Ry. to open for carriage of traffic that portion of its line where the same crosses C.P.R. tracks at Windsor, Ont.

3662. Oct. 3—Authorizing G.T. Pacific Ry. to carry freight traffic over that portion of its line of railway between Portage la Prairie and Miniota, Man.

3663. Oct. 1—Authorizing an extension of time to Dec. 1, 1907, in the order of Dec. 20, 1906, authorizing W.E & L.S.R. Ry. Co. to operate its trains for construction purposes on its line of railway where it crosses the M.C.R. at Talbot St., Essex, Ont.

3664. Sept. 30—Authorizing C.P.R. to construct a branch line in Huntingdon tp., Hastings Co., Ont., from a point on the center line of the main line of railway in a southeasterly direction to and into Benson & Lane's premises, west ½ lot 11, con. 8, Huntingdon tp.

3665. Sept. 30—Authorizing C.P.R. to construct three spurs on the n.e. quar. sec. 27, and s.e. quar. sec. 34, tp. 26, n.r. 20, west 5th mer., British Columbia, to Palliser Lumber Co.'s premises.

3666. Sept. 30—Authorizing C.P.R. to construct a branch line at Joliette, Que., from a point on the Joliette branch of its line in a northwesterly direction to Jos. Martel's premises, lot 175.

3667. Sept. 30—Authorizing C.P.R. to construct certain branch lines in north half and s.w. quar. of sec. 3, tp. 10, r. 16, west 4th mer., for the Reliance Coal Co.

3668. Sept. 30—Authorizing C.P.R. to construct a branch line from a point on the main line at station 4390+84.3, about one mile east of Cascade station, in an easterly direction to and into the Yale Columbia Lumber Co.'s premises, lot 349.

3669. Sept. 30—Authorizing Montreal Terminal Ry. to join its tracks with the tracks or lines operated by the Harbor Commissioners of Montreal on La Salle Ave., Montreal, Que.

3670. Sept. 30—Authorizing Consumers Gas Co. of Toronto to lay a 12-inch gas main under C.P.R. tracks at Yonge Street, north of Cottingham St., Toronto.

3671. Oct. 3—Authorizing Dominion Natural Gas Co. to lay a gas pipe under G.T.R. tracks where the same cross Norfolk St., Simcoe, Ont.

3672. Oct. 3—Authorizing that certain agreements between Grand Valley Ry. and Brantford St. Ry. and the Woodstock, Thames Valley and Ingersoll Electric Ry., dated July 2 and Aug. 27, 1907, be recommended to the Governor-in-Council for approval and sanction.

3673. Oct. 2—Authorizing C.P.R. to construct a branch line from a point on Oldfield, Kirby & Gardner's spur to and into the Sherwin-Williams Paint Co.'s premises, lot d.g.s. 35, St. John, N.B.

3674. Oct. 2—Authorizing C.P.R. to construct a branch line from a point on the North Warehouse spur across various lots owned by the Dunlop-McDonald Co., F. F. Higgs, and McLaren Bros., to and into the Alberta Biscuit Co.'s premises, Calgary, Alta.

3675. Oct. 2—Authorizing C.P.R. to construct a branch line from a point on the Oldfield, Kirby & Gardner spur in a westerly direction into the Manitoba Rolling Mills Co.'s premises, lot d.g.s. 35, St. John parish, Winnipeg; also two other branch lines commencing from a point on the first mentioned spur and extending 460 and 510 ft. respectively.

3676. Oct. 2—Authorizing C.P.R. to construct certain branch lines in Algoma district, Ont., commencing from a point on the Turnbull siding in a westerly and southerly direction to Booth & Shannon's premises, tp. 15, Algoma district.

3677. Oct. 2—Authorizing the town of Brampton, Ont., to lay a 10-inch sewer pipe under G.T.R. tracks where same cross Queen St.

3678. Oct. 2—Authorizing C. W. Hartman of Clarksburg, Ont., to place telephone wires across G.T.R. tracks on the 8th con., tp. of Collingwood, Ont.

3679. Oct. 1—Authorizing C.P.R. to open for traffic that portion of its double track between Fort William and Winnipeg, extending from Kakabeka to Kaministiquia, Ont.

3680. Oct. 1—Authorizing approval of Standard Passenger Tariff C.R.C. no. 1 of the Windsor, Essex & Lake Shore Rapid Ry. on the basis of 3c. a mile.

3681. Oct. 4—Authorizing approval of Standard Freight Tariff C.R.C. no. 1 of the W.E. & L.S.R. Ry. Co.

3682 Oct. 4—Authorizing approval of Standard Passenger Tariff C.R.C. no. 54 of the Bay of Quinte Ry., on the basis of 3c. a mile.

3683. Oct. 4—Authorizing approval of supplements 8, 9, and 10 to Passenger Tariff W-38 of the C.P.R.

3684. March 13—Authorizing Ottawa Electric Ry. to widen the bridge and approaches thereto on Somerset St. by 16 ft.; and that the city of Ottawa pay the Ry. Co. one-fourth of the expense involved in the said addition, leaving the question of apportionment of cost between the Hintonburg Village and O.E. Ry. for further consideration.

3685. Oct. 3—Authorizing Bertie Natural Gas Co. to lay a gas main under G.T.R. tracks at South Mill St., in Ridgeway Village, Ont.

3686-3692. Sept. 30—Authorizing New Brunswick Telephone Co. to place its wires across C.P.R. and Temiscouata Ry. tracks at various points in New Brunswick.

3693. Oct. 4—Approving location of proposed C.N.R. yard and shops, Fort Rouge, Winnipeg. Man.

3694. Oct. 4—Authorizing a further extension to Nov. 15, 1907, in Board's order of Aug. 6, 1906, authorizing the C.N. Ontario Ry. to cross the C.P.R. tracks near Wahnapitae station, Neelon tp., Nipissing district, Ont.

3695. Oct. 4—Approving further change in C.P.R. line west of Mountain, Ont., and authorizing C.P.R. to maintain and operate its line so deviated

3696. Oct. 5—Authorizing Transcontinental Ry. Commissioners to operate their line for construction purposes only where the same crosses C.P.R. track at St. Basile, Portneuf Co., Que.

3697. Oct. 5—Authorizing Mrs. E. Withers, Shelburne, Ont., to carry an electric light wire across C.P.R. tracks in the town of Shelburne.

3698. Oct. 4—Authorizing Bell Telephone Co. to place its wires across C.P.R. tracks at public crossing, 300 yds east of S.S. Marie Station, Ont.

3699 to 3707. Oct. 4—Authorizing the Bell Telephone Co. to place its wires across G.T.R., C P.R. and C.N.R. tracks at various points.

3708. Oct. 8—Approving amended location of C.P.R. between Woodstock and Hartland, B.C., mileage 55 to 64.

3709. Oct. 8—Authorizing Guelph and Goderich Ry. to construct bridges on its Listowel Branch at O'Grady's Creek and Linsoman's Creek.

3710. Oct. 8—Authorizing C.P.R. to reconstruct the bridges at the following points: Teeswater Branch, St. John section, over Mundy Creek, Estevan section, over Moose Mt. Creek.

3711. Oct. 8—Authorizing C.P.R. to construct a branch line in Calgary, Alta., commencing at a point on the easterly boundary of lot 27, block 64, and thence across the northerly portion of lots 26 and 25, the Cockshutt Plow Co.'s property.

3712. Oct. 8—Authorizing C.P.R. to construct certain branch lines or spurs in Cochrane Village, Alta., to C. W. Fisher's premises.

3713. Oct 5—Authorizing St. Mary's village water and fire commissioners to lay water pipes permanently across railway operated by C.P.R. in St. Mary's parish, York county, N.B., where said railway intersects the highway leading from St. Mary's to Miramichi, N.B.

3714 Oct. 4—Approving revised location of G.T. Pacific Ry. through unsurveyed territory, District of North Alberta, mileage 0 to 60.

3715. Oct. 4—Approving proposed change of C.P.R. in its main line from a point on the s.w. quar sec 19, tp. 27, r. 25, west 5th mer., thence southerly to a point on n.w. quar. sec. 6, tp. 27, r. 25, west 5th mer.

3716. Oct. 11—Authorizing Temiscouata Ry. to construct a highway crossing across its line in St. Francis, Madawaska county, N.B., and to do away with the present highway crossing.

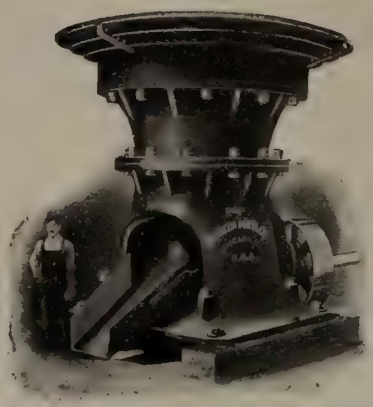
3717. Oct. 3—Authorizing G.T. Pacific Ry. to lay its lines across the C.P.R. tracks, main line, parish lot 58, Portage la Prairie, Man.

3718. Oct. 4—Authorizing C.P.R. to reconstruct bridge no. 121.3 on the Medicine Hat section of its line.

3719 to 3724. Oct. 4—Authorizing C.P.R. to reconstruct bridges nos. 34.9 on the Owen Sound section, 129.8 on the Medicine Hat section, 111.2 and 63 0 on the Cranbrook section, 22.5 on the Sirdar section, 86.45 and 86.5 on the Sherbrooke section.

3725. Oct. 4—Authorizing C.P.R. to construct a branch line in Ingersoll, Ont., from a point on the main line to a point opposite lot 18, owned by G. G. Baron, on the north-east side of Thames St., Ingersoll.

3726. Oct. 4—Authorizing C.P.R. to construct branch line in Salter tp., Ont., from a point at mileage 58.28 from Sudbury,



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in a southwesterly direction to the Spanish River Lumber Co.'s premises, on lot 25, Salter tp., Algoma district, Ont.

3727. Oct. 4—Authorizing C.P.R. to construct a branch line to Christie & Henderson's premises, lot 29, Gore of Puslinch, Ont.

3728. Oct. 4—Authorizing C.P.R. to construct branch line in tp. 31, Algoma district, from a point on Mageau-Leblanc Lumber Co.'s spur, thence in a southeasterly direction, a distance of about 650 feet.

3729. Oct. 7—Authorizing Port Hope Telephone Co. to place its wires across the Midland Division of G.T.R. tracks, Port Hope, Ont.

3730. Oct. 5—Authorizing St. John Ry. to cross C.P.R. tracks on Rodney wharf, St. John, N.B.; and also to place wires across C.P.R. tracks for the conveyance of electricity on Rodney wharf.

3731. Oct. 8—Authorizing Esquimalt & Nanaimo Ry. to maintain in its present condition the crossing known as "Old Esquimalt Road," for foot passengers only, Victoria, B.C.; and dismissing application of city of Victoria for an order directing E. & N. Ry. to construct suitable highway crossing at the point where the said line crosses lands known as "The Old Esquimalt Road."

3732. Oct. 8—Approving location of Brantford & Hamilton Electric Ry. from east side of Murray st., to Grand River, Brantford, Ont.; and that the amended location of the B. & H. E. Ry. between the westerly limit of the Mohawk Institute's property and the east side of Murray st., be approved, with the exception that that part of the north side between the west limit of the Mohawk Institute lands and the east side of Murray st., be limited to 33 feet in width.

3733. Aug. 14—Authorizing the Chief Commissioner to examine witnesses in the application of the C.P.R. for approval of location of new station at Treherne, Man.

3734. Oct. 8—Authorizing that the C.N.R. engines now in course of construction by the Locomotive and Machine Co., Montreal, be equipped with wire netting having a mesh of 2½ x 2½, no. 11 B.W.G., and that all future orders for engines provide for the equipment of the said engines with the standard netting mesh as required by regulations of the Board.

3735. Sept. 9—Authorizing St. Mary's and Western Ontario Ry. to cross with its track the Sarnia branch of the G.T.R. about 5,540 feet west of the St. Mary's Jct. station, Ont.

3736. Oct. 8—Authorizing C.N. Telegraph Co. to place its wires across the B.S. and H.B. Ry. tracks at the crossing of the latter and the C.N.R., in the s.e. part of sec. 18, tp. 10, r. 19, west of prin. mer.

3737 to 3767. Oct. 8—Authorizing the Bell Telephone Co. to cross the tracks of Pere Marquette Rd., Quebec, Montreal and Southern Ry., C.P.R., G.T.R., Michigan Central Rd., C.N.R., T.H. and B., and London and Port Stanley Ry., at various points.

3768. Oct. 10—Authorizing Guelph and Goderich Ry. to construct a bridge at Mackie's Creek, station 455, on its Listowel Branch.

3769. Oct. 9—Approving proposed deviation of C.N. Ontario Ry. through Hawkesbury, mileage 0 to 1.2, Hawkesbury West, Ont.

3770. Oct. 10—Authorizing G.T. Pacific Ry. to open for carriage of traffic certain portions of its double track main line between Fort William and Winnipeg.

3771. Oct 10—Authorizing C.P.R. to construct a branch line in Calgary, Alta., to the Sterling Co.'s premises, lots 9 and 10, block 52.

3772. Oct. 10—Authorizing the Erie Telephone Co. to place its wires across the Michigan Central Rd.'s tracks, Hagersville, Ont.

3773. Oct. 10—Authorizing the Welland Telephone Co. to place its wires across the M.C. Rd.'s tracks at Bridgeburg, Ont., north of the International bridge.

3774. Oct. 10—Authorizing Quebec, Montreal and Southern Ry. to construct its railway across several highways in St. Antoine de la Baie de Febvre, Richelieu district, Yamaska county, Que.

3775. Oct. 10—Authorizing the C.N. Ontario Ry. to construct its line across streets in Hawkesbury, Ont.

3776. Sept. 26—Authorizing T.H. and B. Ry. to construct a branch line from a point on its railway to a connection with its tracks in lot "Q," Brantford, Ont., crossing Newport and East Newport streets.

3777. Oct. 11—Authorizing the National Transcontinental Ry. Commissioners to join the New Brunswick Coal and Ry. tracks with their track at or near Chipman, Queens county, N.B.

3778. Oct. 17—Authorizing town of Richmond, Que., to lay an eight-inch water main under G.T.R. tracks at Main St., Richmond, Que.

3779. Oct. 11—Authorizing approval of G.T. Pacific Ry.'s Standard Freight Mileage Tariff C.R.C. no. 1, applying on traffic carried on that portion of the line between Portage la Prairie and Rae, Man.

3780. Oct. 11—Authorizing G.T. Pacific Ry. to carry freight traffic over the portion of its line between Portage la Prairie, mile 54.1 and Rae, mile 176, Man; and cancelling Board's order of Oct. 3, 1907.

3781. Oct. 11—Authorizing T.H. and B. Ry. to reconstruct bridge no. 60.18 over power canal, 2.37 miles east of Brantford, Ont.

3782. Oct. 11—Approving revised location of C.P.R. between Coleridge and Lethbridge, Alta.

3783. Oct. 11—Authorizing W. McGuire, Elmvale, Ont., to carry a telephone wire across C.P.R. tracks two miles north of Craighurst, Ont.

3784. Oct. 11—Authorizing Ingersoll Telephone Co. to place its wires over the G.T.R. tracks from the freight shed to its station at Ingersoll, Ont.

3785. Oct. 11—Authorizing C.P.R. to construct a branch line in Portage la Prairie, Man., from a point on west side of Lee st., thence easterly to Snyder Bros.' premises on lots 36 and 37, parish lot 69.

3786. Oct. 15—Authorizing Bell Telephone Co. to place its wires across C.N.R. tracks at Oak avenue and Goulet st., Norwood, Winnipeg, Man.

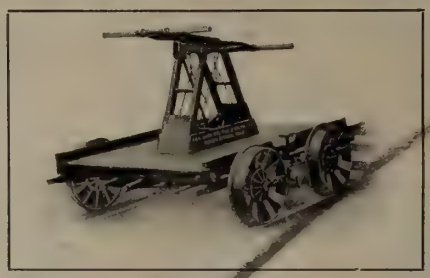
3787. Oct. 11—Authorizing C.P.R. to reconstruct 21 bridges over rivers and highways.

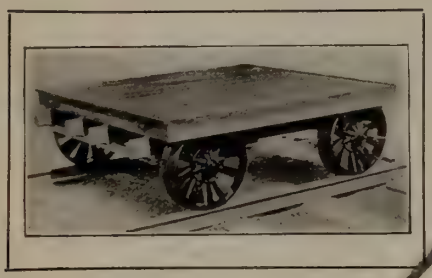
G.T.R. Ottawa Station and Hotel.

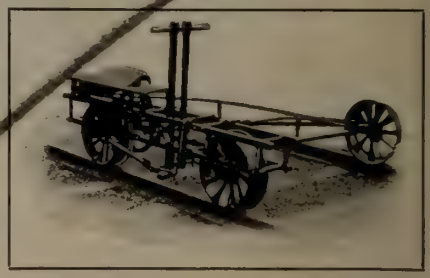
The plans of the Ottawa Terminals Railway Co., which is controlled by the G.T.R., for a central station and office building, and a hotel at Ottawa, have been approved by the Dominion Government, and preliminary work has been begun on the site, so that foundations for both structures may be put in this fall. The station and office building, which will be erected practically on the site of the present Canada Atlantic Ry. station, but which will, of course, occupy more space, will be approximately 150 ft. square; the main waiting-room, ticket office, concourse, etc., being located on the track level adjoining a new station plaza, 90 x 180 ft., for hacks, baggage waggons, street cars, etc., similar to the Bonaventure station plaza at Montreal. Adjoining this plaza and the station proper the train shed, 800 by 150 ft., will extend alongside the Rideau Canal, the passenger platforms being 20 ft. wide, and over 1,000 ft. long, and covering nine tracks with connection to Alexandra bridge. This train shed is designed to be used for the G.T.R., the C.P.R., the New York Central Rd., and future connections. The Rideau St. level will be approximately 22 ft. higher than the tracks. At the center of the building at this level will be a wide interior portico and lobby with a commodious stairway to waiting-room below; also ample elevator service. The wide, generous exit stairway from the train shed and concourse will be used for this purpose only, and extend to the intersection of Sapper's bridge at the Rideau St. level, as at present, from the old station. The mezzanine between grades will contain the train despatcher's and station master's offices, service rooms, etc. The upper floors will be arranged for railway offices, with all modern accommodation. The structure in all its details will be fireproof throughout, with framework of steel, and exterior of stone, a modern, up-to-date structure, with all accessories for convenience and comfort. A separate annex will be located at the axis line of Sussex St., which it is likely will be widened by the city, and will contain baggage and express rooms, also rooms for conductors and trainmen, mail, customs, power plant, etc. The area of the principal rooms will be approximately as follows: general waiting-room, 52 ft. square, with wide wings, each 50 x 50 ft. and 40 ft. high; women's room, 52 x 32 ft., with rest room, lavatory, etc.; men's smoking room, 32 ft. square; union ticket office, 52 ft. square; lunch room, 52 x 35 ft.; sleeping car and telegraph offices and information bureau, each 15 x 20 ft.; train despatcher's office, 52 ft. square; telephone booth, news stand, parcel room, etc., as required, also second-class accommodation: public concourse, 155 x 50 ft.; union baggage room, 90 x 70 ft.; express room, 50 x 50 ft., etc. The total ground area utilized for terminal station, approaches, etc., will amount to over 300,000 sq. ft. Thus Ottawa will possess, when it is completed in 1909, a union station larger in comparison than any other city of its size either in Canada or the U.S.

The hotel will be erected in the south-west corner of Major's Hill Park, overlooking the Parliament Buildings, Ottawa River, Rideau Canal, and with distant views of the Chaudiere Falls, the Gatineau Valley and the Laurentian Mountains. It will contain over 300 bedrooms and 125 baths, in addition to ample service and public rooms, private banquet halls and ballrooms, special and royal suites, etc., also terraces on the ground floor overlooking the park, with lamps similar to those on the Bois du Boulogne in Paris. It will have all modern conveniences, accommodations and furnishings which go to make up a first-class and successful hotel, and will provide what Ottawa has long needed in this respect. In keeping with the Parliament Buildings, which dominate the local architecture, also the new departmental buildings, soon to be erected, the station and hotel have been designed in a free gothic style, by B. G. Lee, of New York.

Since the opening of the C.P.R. shops at Toronto Junction, it is stated that 60 men have met with death whilst engaged in active railway work, and considering that practically 25% of the town's population is composed of railway men, the proportion is not a large one. The annual memorial service for men who have lost their lives while engaged in their duties was held there recently, and was largely attended by railway men.







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G.T.R. SEMI-ANNUAL MEETING.

The following report for the half-year ended June 30, was submitted at the meeting of shareholders in London, Eng., Oct. 10.

The following summary shows a comparison of the half-year's revenue account with that of the corresponding half-year, ended June 30, 1906:

June 30, 1906.		June 30, 1907.
£3,021,681	Gross receipts	£ 3,381,259 17 4
	Deduct—	
2,184,821	Working expenses, being at the rate of 73.54%, as compared with 72.31% in 1906,	2,486,544 1 4
£ 836,860	Net traffic receipts	£ 894,715 16 0
	Add—	
16,013	Amount received from the International Bridge Co.	16,012 16 7
6,507	Interest on Central Vermont Ry. bonds	6,506 14 3
60,310	Interest on securities of controlled lines and on St. Clair tunnel bonds acquired by the issue of G. T. 4% debenture stock	60,310 11 11
25,178	Balance of general interest account	48,246 19 11
£ 944,868	Net revenue receipts	£1,025,792 18 8

NET REVENUE CHARGES FOR THE HALF-YEAR.

June 30, 1906.		June 30, 1907.
£ 77,603	Rents (leased lines)	£ 77,603 0 9
488,746	Interest on debenture stocks and bonds of the Co	489,728 18 1
45,775	Interest on debenture stock and bonds of lines consolidated with the G.T. Co.	44,371 14 9
30,296	Canada Atlantic Ry. deficit.	87,800 7 2
..	Detroit, Grand Haven, and Milwaukee Ry. deficiency	10,970 4 11
£ 642,420		£ 710,474 5 8
	Deduct—	
	Grand Trunk Western Ry. repayment of amount advanced on account of interest, June, 1901.	
£6,221		
	Detroit, Grand Haven, and Milwaukee	
1,192	Ry. surplus.	
7,413		
£635,007		£ 710,474 5 8
309,861	Leaving a surplus of	315,318 13 0
£ 944,868		£1,025,792 18 8

Adding the balance of £13,231 1s. 7d. at the credit of net revenue account Dec. 31, 1906, to the above surplus for the past half-year of £315,318 13s. 0d., the total amount available for dividend is £328,549 14s. 7d., from which the directors recommend the payment of the following dividends, viz.:

Half-year's dividend on 4% guaranteed stock	£ 165,278 14 0
Half-year's dividend on first preference stock	85,420 15 0
Half-year's dividend on second preference stock	63,210 0 4
	£ 313,909 9 4

leaving a balance of £14,640 5s. 3d. to be carried forward to next half-year's account.

Following is a comparison of the receipts for the half-years ending June 30, 1907 and 1906:

Description of receipts.	1907.	1906.	Increase.	Decrease.
	£	£	£	£
Passengers	889,281	829,893	59,388	....
Mails and express	142,202	133,955	8,247	....
Freight and live stock	2,271,948	1,980,000	291,948	....
Miscellaneous	77,828	77,833	....	5
	£3,381,259	£3,021,681	£359,578	....

TRAFFIC STATISTICS.

	1907.	1906.	Increase.	Decrease.
Passengers carried	4,936,016	4,616,957	319,059	...
Average fare per passenger	43.24d.	43.14d.	0.10d.	....
Tons of freight and live stock	8,510,574	7,598,784	911,790	....
Average rate per ton	64.07d.	62.54d.	1.53d.	....
Tons carried one mile	1,626,383,387	1,442,477,714	183,905,673	....
Earnings per train mile	80.49d.	74.37d.	6.12d.	....

The average rate per ton per mile on the entire freight business was 0.68 of a cent, compared with 0.67 of a cent in the corresponding half-year.

The working expenses, excluding taxes, amounted in the half-year to £2,445,662, or 72.33% of the gross receipts, as compared with £2,107,118, or 69.73%; an increase in amount of £338,544, an increase in the proportion to the gross receipts of 2.60%.

Following is a comparison of the revenue expenditure, including taxes, for the half-years ended June 30, 1907 and 1906:

Description of expenditure.	1907.	1906.	Increase.	Decrease.
	£	£	£	£
Maintenance of way and structures	287,671	287,671	....	....
Maintenance of equipment	653,285	564,738	88,547	....
Conducting transportation	1,387,343	1,177,307	210,036	....
General expenses	117,363	77,402	39,961	....
Taxes	40,882	77,703	....	36,821
Total	£2,486,544	£2,184,821	£301,723	....
Percentage of gross receipts	73.54	72.31	1.23	....
Expenditure per train-mile	59.19d.	53.77d.	5.42d.	....

The train mileage of the half-year compares with that for the half-year ending June 30, 1906, as follows:

Description of mileage.	1907.	1906.	Increase.	Decrease.
Passenger	4,152,908	4,063,785	89,123	....
Freight	5,619,480	5,354,923	264,557	...
Mixed trains	309,425	333,936	....	23,611
Total	10,081,813	9,751,744	330,069	....

It will be observed that the gross receipts for the half-year show an increase of £359,578, or 11.90%; the working expenses, including taxes, an increase of £301,723, or 13.81%; and the train mileage an increase of 330,069, or 3.38%.

The total charges to the capital account amounted for the half-year to £432,579 12s. 3d., but this amount was reduced by the premium on debenture stock issued in exchange for Midland bonds, less discount on 4% guaranteed stock sold during the half-year to £430,740 7s. 0d. The actual expenditure on capital account was as follows:

New works	£ 2,957 12 0
Double track	39,791 15 2
New rolling stock	360,329 8 6
Land purchased	29,500 16 7
Total	£432,579 12 3

The equipment has been increased during the half-year by the purchase of 1,000 steel coal cars, 195 furniture cars, and 785 box cars, the cost of which, amounting to £360,329 8s. 6d., has been charged to capital account. Thirty compound consolidation freight engines, 14 switch engines, and 13 first-class, 1 second-class, 500 stock, 46 refrigerator, 1,067 flat, and 300 ballast cars and 2 steam derricks were purchased, and 4 ten-wheeled passenger engines, 3 parlor, 5 first-class, 5 baggage, 34 flat, 12 caboose cars, and 4 snowplows, were built in the company's shops during the half-year on revenue account.

Owing to the large increase in the traffic it has become necessary to double the 31 miles of line between St. Lambert, at the east end of the Victoria Bridge, and Ste. Rosalie, used jointly by the company and the Intercolonial Ry. The work is in progress, and it is anticipated will be completed during the present season. The estimated cost is £166,000, and under the terms of the agreement the Dominion Government will either pay, as additional rental, interest at 4% on a proportion of the actual cost, equal to the proportion which the engine and car mileage of the Intercolonial Ry. bears to the total engine and car mileage over that portion of the line, or pay in cash such proportion of the actual cost. The completion of the double track between Lynden and Brantford, and London and Hyde Park Junction, on the line between Hamilton and Sarnia, gives to the company a continuous double track from Montreal to Chicago, a distance of 850 miles, with the exception of the St. Clair tunnel, which is single-track, and about five miles at Valparaiso, the doubling of which has been delayed owing to arrangements having to be made for crossing the tracks of other companies.

As intimated by the president at the last meeting, it has been decided to institute a pension fund for the benefit of the whole of the employes of the company, under powers conferred by an act passed during the last session of the Dominion Parliament. It was considered necessary to at once form a nucleus for the fund, and for that purpose the sum of £40,000 has been included in the general expenses of the past half-year.

The gross receipts of the Canada Atlantic Ry. for the half-year amounted to £180,646, against £189,604 in 1906, a decrease of £8,958, and the working expenses wese £206,343, against £159,375, an increase of £46,968, leaving a revenue deficiency of £25,697 in 1907, compared with a profit of £30,229 in 1906. The interest charges for the half-year were £62,103, against £60,525, so that there was a net revenue deficiency of £87,800. The number of passengers carried during the half-year was 211,020 against 223,047, a decrease of 12,027, or 5.39%; and the passenger receipts, including mails and express receipts, were £43,567, against £40,501, an increase of £3,066, or 7.57%. The quantity of freight moved was 854,967 tons, against 686,670 tons in 1906, an increase of 168,297 tons, or 24.51%; and the receipts from freight traffic were £131,330, against £143,927, a decrease of £12,597, or 8.75%. This decrease in receipts, notwithstanding the increased number of tons moved, is due to the fact that for the purpose of relieving the congestion on other portions of the system a considerable amount of traffic was diverted to the Canada Atlantic Line, and was carried a very short distance only.

The gross receipts of the Grand Trunk Western Ry. for the half-year amounted to £599,033, against £519,016 in 1906, an increase of £80,017, and the working expenses were £516,535, against £435,459, an increase of £81,076, leaving a net profit of £82,498, compared with £83,557 in the corresponding half-year. The net revenue charges for the half-year were £81,577, against £82,718, so that there was a net revenue surplus for the half-year of £921 as compared with £839 for the corresponding half-year of 1906. Adding the net revenue surplus of £17,252 for the half-year ended Dec. 31, 1906, to the above surplus of £921, and the balance of £884 carried forward June 30, 1906, the net revenue balance amounts to £19,057, which will admit of the payment of the full interest on the second mortgage income bonds for the year, and leave a balance of £6,728 to be carried forward. The number of passengers carried during the half-year was 830,242, against 840,972, a decrease of 10,730, or 1.28%; and the passenger train receipts, including mails and express receipts, were £158,018, against £147,186, an increase of £10,832, or 7.36%. The quantity of freight moved during the half-year was 1,852,607 tons, against 1,635,405 tons, an increase of

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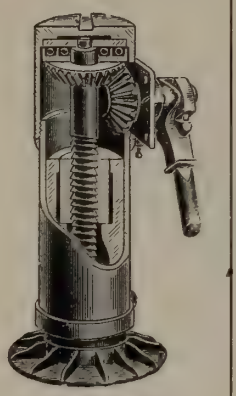
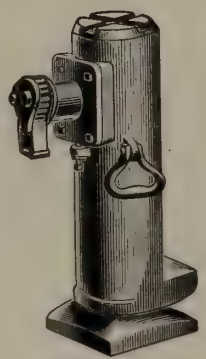


Sectional View



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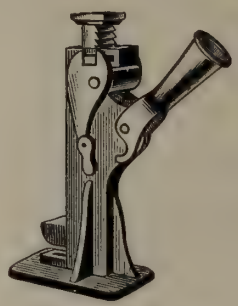

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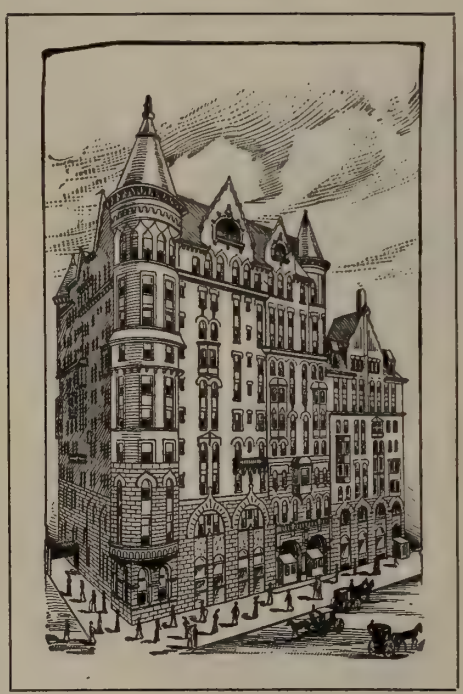

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217,202 tons, or 13.28%, and the receipts from this traffic were £440,298, against £371,235 in 1906, an increase of £69,063, or 18.60%.

The gross receipts of the Detroit, Grand Haven, and Milwaukee Ry. for the half-year were £165,644, against £161,279 in 1906, an increase of £4,365; the working expenses were £139,662, against £122,284, an increase of £17,378; thus leaving a balance of £25,982, against £38,995, a decrease of £13,013, compared with the corresponding half-year of 1906. The net revenue charges for the half-year were £36,952, against £37,803 in 1906, so that there was a net revenue deficiency of £10,970 as compared with a surplus of £1,192, for the corresponding period of 1906. The number of passengers carried during the half-year was 308,622, against 292,850, an increase of 15,772, or 5.39%; and the passenger receipts, including mails and express receipts, were £48,512, against £46,788, an increase of £1,724, or 3.68%. The quantity of freight moved was 774,835 tons, against 784,522 tons in 1906, a decrease of 9,687 tons, or 1.23%; and the receipts from freight traffic were £113,978, against £110,933 in 1906, an increase of £3,045, or 2.74%.

Considerable progress continues to be made in the work of construction on the Grand Trunk Pacific Ry.; but there has been some delay, owing to the lateness of the spring, in obtaining ties in sufficient quantities to enable the laying of the rails to be carried on continuously. About 40 miles of rails have been laid on the Lake Superior branch and 135 miles on the Western Division, and sufficient grading has been completed to permit of tracklaying being carried on as rapidly as the delivery of ties will allow. It is anticipated that at least 200 miles of additional track will have been laid before the close of the season. The work on the construction of the large bridges at Saskatoon, Battle River, and Edmonton, is progressing satisfactorily.

The Chief Engineer reports that the expenditure for maintenance of the company's property for the half-year was the same as for the corresponding period of 1906. The company's permanent way and works have been maintained in good condition

The Superintendent of Motive Power reports the expenditure, mileage etc., as follows:

Half-year ended.	Total expenditure.	Train Mileage.	Rate of Expenses per Mile. Train	Engine	Car.
			Cents	Cents	Cents
June, 1907..	$4,848,724	10,081,813	48.09	36.52	3.05
June, 1906	4,347,556	9,751,744	44.58	34.92	2.77

An increase in expenditure of $501,168.00, or 11.53%, compared with an increase in train miles of 330,069, or 3.38%.

	Passenger Trains	Freight Trains	Mixed Trains.
The average number of cars moved per train was.....	4.5	24.6	7.6
And for the corresponding period.....	4.3	25.5	7.9

During the half-year 75 old light capacity engines were scrapped or set aside to be scrapped. and 27 engines were sold. Of the latter 3 were purchased by the Grand Trunk Western Ry., 3 by the Detroit, Grand Haven, and Milwaukee Ry. and 17 by the G.T. Pacific Ry. Four ten-wheel passenger engines were turned out new at the company's works, Point St Charles, and 30 compound consolidation freight engines and 14 switch engines were purchased, delivered, and put into service during the half-year. Three switch engines were purchased by the C.S. & M. Ry. from the G.T. Western Ry. The actual stock June 30, 1907, was 803 engines, against the official figure of 803 engines.

The comparative cost of repairs per train, engine and car mile was:

Cost per Mile.	Repairs and Renewals of Locomotives. 1907.	1906.	All repairing charges including shop, machinery, tools, and marine equipment, etc. 1907.	1906.
	Cents.	Cents.	Cents.	Cents.
Train	11.57	12.26	15.74	15.30
Engine	9.54	9.60	11.95	11.98
Car	0.80	0.76	1.00	0.95

The Superintendent of Car Department reports expenditure, mileage, etc., was as follows:

Half-year ended.	Total cost of Repairs and Renewals.	Total Miles run by Cars. Passenger.	Freight.	Total.	Cost per Mile. Car.	Train.
					Cents.	Cents.
June, 1907.	$1,592,300	19,237,218	139,865,332	159,102,550	1.000	15.79
" 1906.	1,259,813	18,337,506	138,660,457	156,997,963	0.802	12.92

An increase in expenditure of $332,487, or 26.39%, with an increase in car miles of 2,104,587 or 1.34%.

The revenue account was as follows:

RECEIPTS.

	£	s.	d.	£	s.	d.	£	s.	d.
Passengers				896,044	5	10			
Less—International bridge tolls	680	11	9						
St. Clair tunnel tolls	6,082	10	0						
				6,763	1	9			
							889,281	4	1
Mails and express							142,202	0	11
Freight and live stock				2,372,629	1	5			
Less—Cartage, etc.	57,642	6	2						
International bridge tolls	14,999	15	4						
St. Clair tunnel tolls	28,038	14	0						
				100,680	15	6			
							2,271,948	5	11
Miscellaneous receipts, rents, tolls, etc.							77,828	6	5
							£3,381,259	17	4

EXPENDITURE, JUNE 30, 1906

		£	s.	d.
Maintenance of way and structures	8.50%	287,671	4	8
Maintenance of equipment	19.32%	653,285	12	8
Conducting transportation	41.04%	1,387,342	16	5
General expenses	3.47%	117,362	12	11
Total working expenses	72.33%	2,445,662	6	8
Taxes	1.21%	40,881	14	8
	73.54%	2,486,544	1	4
Balance to net revenue account		894,715	16	0
		£3,381,259	17	4

The report was adopted, the resolutions respecting the payment of the dividends recommended, and the appropriation of £40,000 towards the pension fund passed. There was a good deal of criticism of the pension fund proposal, but a suggestion to move a vote of want of confidence in the directorate was voted down.

The Guelph and Goderich Railway.

The Guelph and Goderich Ry. from Guelph to Goderich, Ont., which was formally opened for traffic Sept. 12, and which has been leased to the C.P.R. Co., and will be operated as one of its branch lines, took exactly three years to construct. As this may seem an unusually long time in which to build 80 miles of railway, the permanent character of the work must be considered, together with the severe winter, and the extensive work on the Goderich end, where the line crosses the Maitland River valley. This portion of the work alone consisted of 10,450 cubic yards of concrete in bridges and retaining walls, and 265,000 cubic yards of earthwork in embankments. The distance from Guelph to Goderich is 80 miles, and with the exception of 20 miles at the Goderich end the work of location presented but few difficult engineering problems. The location of the last 20 miles, however, was repeatedly revised, leaving no doubt whatever as to the final location being the most favorable one.

The limits of grade and curvature were fixed by rules and diagrams issued by the C.P.R. for the use of velocity grades wherever practicable, such limitations being based on experiments made on an extensive scale by the Northern Pacific Ry., and from which the diagrams referred to had been prepared. The application of the diagrams to the original grade profiles eliminated much heavy work, and established on an economic basis a virtual 0.60% profile for eastbound traffic, for a minimum speed of 10 miles per hour, with a train load of 1,630 tons. In extreme cases the above limitations may have been exceeded, depending perhaps on an increased acceleration to overcome some of the higher summits. In order that the effect of such acceleration could be determined the experimental diagram had to be dispensed with and the usual theoretical rule substituted. This necessitated a comparison to be made of the data obtained by experiment with results obtained by theory, in expectation of effecting a change in the 0.60% and 10 mile per hour requirement to embrace the new conditions, but it was impossible to do so with the class of locomotion expected to be put in operation on the division. The requirement had therefore to be departed from in some cases, reducing the speed at summits to 6 miles an hour and even lower. The velocity heads given on speed diagrams were substantially those given in table 118 of Wellington Railway Location, and are derived from the formula for finding force of gravity in falling bodies, $h\frac{r^2}{2g}$, to which is added 6.14% for the rotative energy stored in the wheels.

The work of construction on the first 60 miles from Guelph was comparatively of a light character, such as is usually encountered in undulating country; the average quantity of earthwork per mile being 18,300 cubic yards. The work on the last 20 miles was much heavier, the average quantity per mile being 42,000 cubic yards. No rock had been encountered throughout the whole line. The classifications specified were "solid rock," "loose rock," and "common excavation," the latter embracing all materials which could not be classed as loose rock.

To avoid disputes and simplify questions arising from the calculation of overhaul the usual clause was annulled, and a fixed amount included in contractor's tender to cover all overhaul, such amount being previously determined by the extra cost of removing from line excavation the quantity in gullets of sufficient width to permit of the extra widening being done by steam shovel and train haul.

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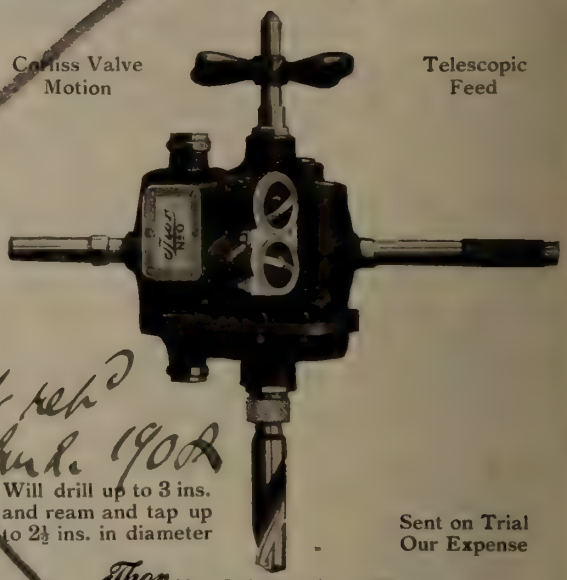

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concrete, the only exception being the upstream faces of cutwater piers, which are faced with cut stones. The proportions of concrete used were for piers and abutments one, four, seven, and for arch culverts and foundations under water one, three, five. The C.P.R. standard designs were adhered to as closely as circumstances would permit. The graceful form of the piers of the larger structures evolved from the application of the convexed starlings of cutwaters, it being found that a circular end above the cutwater permitted of a shorter base. This form of cutwater, in addition to being a more massive form for concrete work, is probably the only practicable one which offers least resistance to the current. There are altogether 29 bridges, with steel superstructures, and although four of these are of considerable magnitude, there are no lattice spans, plate girders being used exclusively up to 110 ft. length of girder. This feature in the design of the larger structures imparts to them the appearance of strength and stability.

The station buildings and terminals are built in conformity with the substantial character of the work already described. The entire road is laid with 80-lb. rails, and excellent ballast was available at convenient intervals along the line.

The whole work was carried out under the direction of P. A. Peterson, as Chief Engineer, the organization of the engineering staff being an assistant engineer and accountant at headquarters, one divisional engineer and two residences to each 20 miles of line. For construction purposes the work was divided into 10 mile sections. The contractors for sections 1, 4, 5 and 6 were Campbell & Folinsbell, Strathroy, Ont., and for sections 2, 3, 7 and 8, M. A. Piggott & Co., Hamilton, Ont.—J. Grant MacGregor, C.E., in Canadian Engineer.

Comparative Railway Statistics.

At the Canadian Manufacturers' Association meeting in Toronto, recently, A. Blue, Chief Census Officer, read a paper on "Some Illustrations of the Growth of Canada in the 20th Century," in which he said: "Our steam railways in operation in the Dominion in 1870 had a length of 2,617 miles, and in 1876, of 5,218 miles. At the end of the century they had a length of 17,657 miles, and in 1906, of 21,353 miles, together with 814 miles of electric railways. The earliest statistics of railway operations go back to 1875, and in the following table a few comparative figures are given to show the progress of the Dominion in this great branch of transportation:

Steam Railways.	1876	1900	1906
Train mileage....	18,103,628	52,647,684	72,723,482
Passengers... no.	5,544,814	17,122,193	27,989,782
Freight.....tons	6,331,757	35,764,970	57,966,713
Gross earnings..	$19,358,085	70,231,979	125,322,865
Net earnings.....	3,555,364	22,826,383	38,193,431

The increase of train mileage in the six years of the 20th century is 20,000,000; of passengers, 10,867,000; of freight, 22,200,000 tons; of gross earnings, $55,000,000, and of net earnings, $15,367,000; as against an increase of 34,544,000 train mileage, 11,577,000 passengers, 29,433,000 freight tons, $50,874,000 gross earnings, and $19,271,000 net earnings, in the 24 years of the 19th century. The statistics of electric railways are complete only for the six years of this century, in which they show an increase of 116,720,000 passengers carried and of $2,137,000 net earnings, being for each in a period of five years an increase of 100%. The subscribed capital of steam railways in 1876 was $317,795,468, and the paid-up capital $290,757,875. In 1900, the subscribed capital of steam and electric railways was $1,040,486,378, and the paid-up capital $998,264,405; and in 1906, the subscribed capital was $1,456,176,443, and the paid-up capital $1,396,356,675."

The Premier on the All-Red Line.

At the Canadian Manufacturers' Association's annual dinner in Toronto recently, Sir Wilfred Laurier made an important statement in reference to the all-red line. After speaking of the Japanese treaty, he said: "There is all the less inclination on the part of the Canadian Government to annul that treaty because we are in hope of establishing what is called the 'all-red line.' It is a new project, which was launched at the last conference, to have a line of connection between England and the Orient—not only to Japan, but to China and Australia, which is a British country, and which would pass over the territory of Canada. Nature has made the Canadian route the shortest route between Europe and the Orient. It is true that we are laboring under great difficulties. We have to compete with our formidable neighbors to the south. But these difficulties, though great, are not such as to deter us from the goal. I fully believe, for my part, that this project when accomplished, and accomplished it must and will be, will prove of the greatest possible advantage to Canada at large, to Ontario, and to Quebec, but still more to the Maritime Provinces, and to that Province on the Pacific, British Columbia. We must succeed in that. Canada cannot do it alone. We must have the assistance of the motherland in this. We do not want to, nor will we dictate to the people of Great Britain; we do not want to arrogate to ourselves the power to say to them: 'You must do this.' But when I reflect at this moment upon the fact that the greatest ship in the world, the Lusitania, has been built with British money, when I recall that the Cunard Line has received a heavy subsidy to build a line of steamers plying between Liverpool and New York, my hope runs high. I do not begrudge what has been done in that regard, or what may be done in the future to cultivate better relations with our neighbors in the great nation to the south. The better the relations with our neighbors, the better and friendlier the relations between Great Britain and the United States, for my part the better pleased I will be. I want to have nothing but the friendliest relations with our neighbors; but may I not say this: if the British people, the British Parliament, and the British Government have taken money out of the treasury of Britain in order to build a line between Great Britain and a foreign country, can we not expect that the British people, the British Parliament, and the British Government will do as much for a line of steamers between British territory and British territory? I have no intention, and Canada has no intention, of dictating to the people of Great Britain; but we may surely ask them if they will not do as much for those of their own kith and kin as for those who were at one time their kith and kin, but who have severed their allegiance. We have here a policy which will bind together the British Empire far more closely than armies and navies—it is a policy of trade and commerce. I notice that Mr. Blackstock quoted from Oliver Goldsmith the words, 'Honor sinks where commerce long prevails.' Well, I do not harbor that sentiment. I would rather believe that honor will arise where commerce will prevail, for after all, what is there to bind people more potent than the interests of commerce? Let two men trade together and they will be friends; let two nations trade together and they also will be friends. Let the policy of trade and commerce prevail and we shall have peace in the world as never before. It is because this principle has been forgotten in the past that we have had wars. But the moment that commerce arises among the nations, peace and honor will arise. With regard to the all-red line project, I do not know that its immediate success is assured. It is surrounded with difficulties, but difficulties have no terrors for me at all events. I have been accustomed to deal with difficulties all my life, and, indeed, a man is no good until he has difficulties to overcome and overcomes them. Difficulties we have had, difficulties we will have, but difficulties we will overcome, and this project shall and will succeed."

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-07, from July 1, 1907:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$1,024,300	$ 662,300	$ 362,000	$420,500+
Aug..	835,600	619,200	216,400	240,700+
	$1,859,900	$1,281,500	$ 578,400	$ 661,200+

Approximate earnings for Sept. $758,300, against $624,400 for Sept., 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-7, from July 1, 1907:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$7,008,274.46	$4,501,421.80	$2,506,852.66	$135,041.58+
Aug.	7,010,177.40	4,439,902.25	2,570,275.15	107,695.95+
	$14,018,451.86	$8,941,324.05	$5,077,127.81	$242,737.53+

Approximate earnings for Sept. $6,351,000, against $6,101,000 for Sept., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Approximate earnings for Sept., $304,403, against $291,813 for Sept., 1906.

MINERAL RANGE RY.—Gross earnings for Aug., $72,294.39; net earnings, $21,719.72, against $68,217.54 gross and $24,038.42 net for Aug., 1906. Net earnings for two months ended Aug. 31, $36,801.79, against $44,573.10 for same period 1906. Approximate earnings for Sept. $68,161, against $60,140 for Sept. 1906.

MINNEAPOLIS, ST PAUL AND SAULT STE. MARIE RY.—Approximate earnings for Sept., $1,086,776 against $1,199,920 for Sept. 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings of the G.T.R., the C. A. R., the G. T. Western Ry., and the D. G. H. &M. Ry., separately, for Aug., as compared with Aug., 1906:

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$3,146,300	$2,957,000
Expenses	2,149,400	2,024,000
Net earnings	$ 996,900	$ 933,000

CANADA ATLANTIC RAILWAY.

Earnings	$ 209,300	$ 200,200
Expenses	171,600	153,600
Net earnings	$ 37,700	$ 46,600

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 595,000	$ 540,100
Expenses	469,100	440,500
Net earnings	$ 125,900	$ 99,600

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 191,900	$ 187,900
Expenses	134,400	115,100
Net earnings	$ 57,500	$ 72,800

Approximate earnings for Sept., $4,049,923, against $3,813,188 for Sept., 1906.

The Royal Commission investigating the causes of the Quebec Bridge disaster, having taken all the Canadian evidence, has gone to Phœnixville, Pa., where it opened its enquiry Oct. 24. After concluding the taking of the evidence from the works of the contractors, the Commission will, it is stated, re-visit the scene of the collapse before submitting its report.

An application by D. D. Mann, of Mackenzie, Mann & Co., Ltd., on behalf of the Moose Mountain Smelting Co., Ltd., for a large area of land at Ashbridge's Bay, Toronto, including Simcoe Park, for the establishment of a large smelter, and other allied works, including car shops, with wharves, docks, and railway facilities, is under consideration by the Board of Control.

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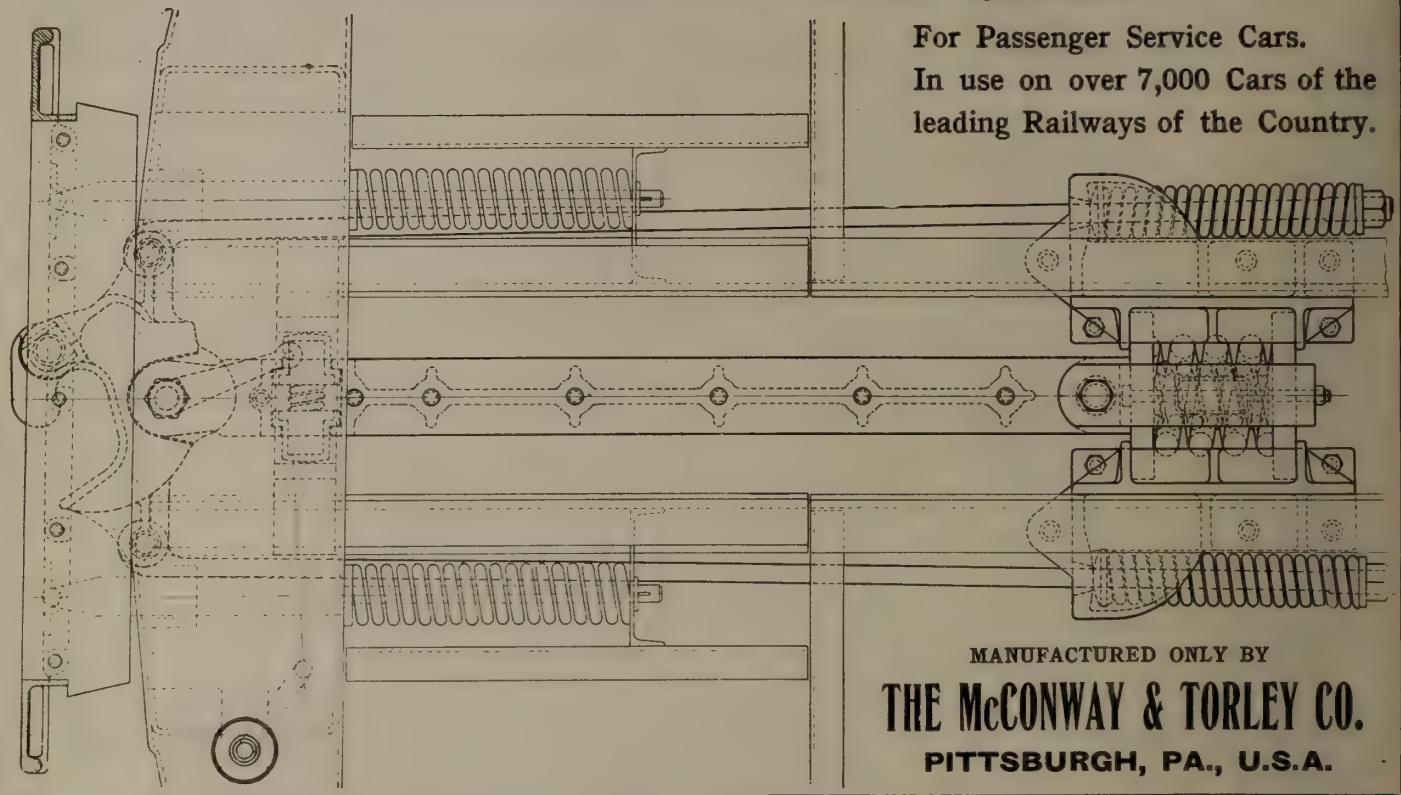

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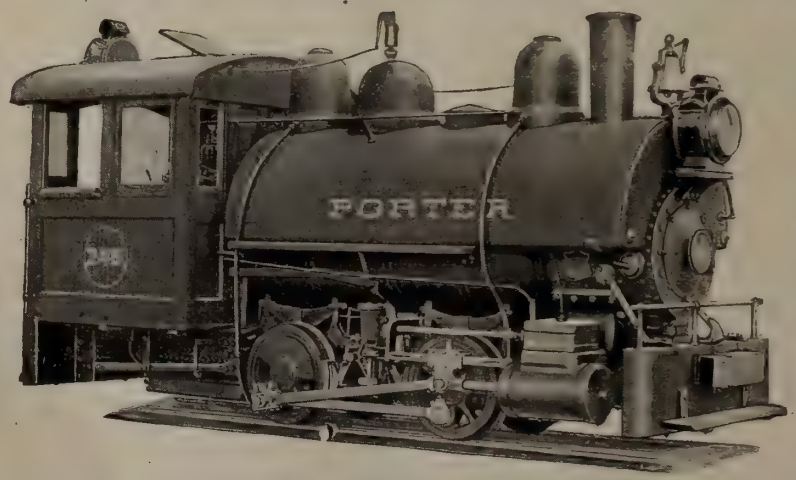

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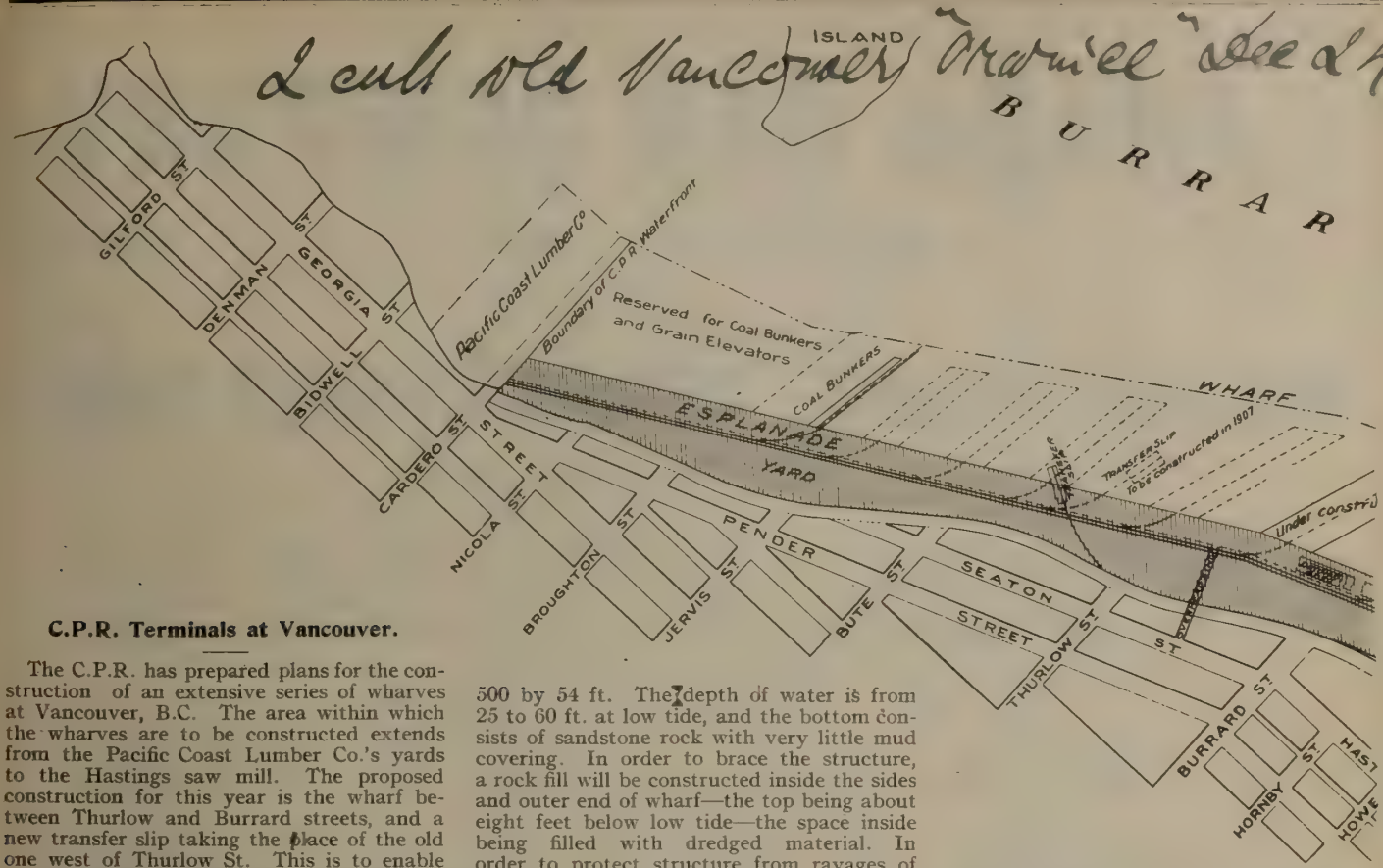
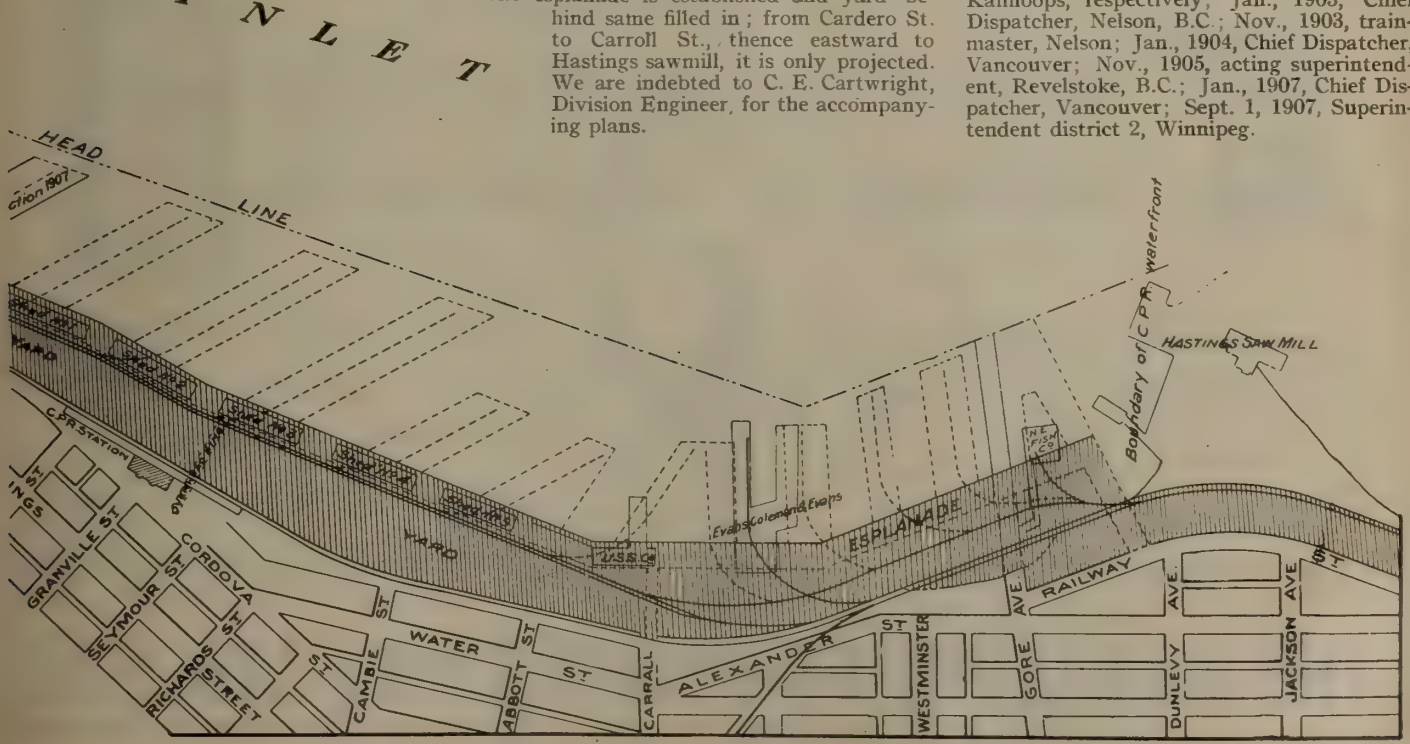


C.P.R. Terminals at Vancouver.

The C.P.R. has prepared plans for the construction of an extensive series of wharves at Vancouver, B.C. The area within which the wharves are to be constructed extends from the Pacific Coast Lumber Co.'s yards to the Hastings saw mill. The proposed construction for this year is the wharf between Thurlow and Burrard streets, and a new transfer slip taking the place of the old one west of Thurlow St. This is to enable transfer barges to be loaded at any stage of the tide. The other wharves, shown by dotted lines on accompanying plan, have yet to be constructed, and a good many of them are not likely to be built for some time. The contracts for dredging, rock filling, turpentine piles and Australian hardwood decking, for the first of the piers to be erected, have been let. The pier will be 640 ft. long by 172 ft. wide, with three depressed tracks in center, and will have two sheds 500 by 54 ft. The depth of water is from 25 to 60 ft. at low tide, and the bottom consists of sandstone rock with very little mud covering. In order to brace the structure, a rock fill will be constructed inside the sides and outer end of wharf—the top being about eight feet below low tide—the space inside being filled with dredged material. In order to protect structure from ravages of the teredo and limnoria, which act quickly in Burrard Inlet, the piling used will be Australian turpentine, which is practically proof against marine insects, for the four outside rows on each side and end. In the interior portion fir piling will be used, protected by a covering manufactured by a local company. The caps, joists, etc., will be fir, treated with carbolite carbolineum, and the deck will be Australian hardwood. The sheds will be constructed of corrugated iron. This wharf will be especially for the Oriental trade, and is the first of a series to be constructed as requirements demand. The esplanade is established and yard behind same filled in; from Cardero St. to Carroll St., thence eastward to Hastings sawmill, it is only projected. We are indebted to C. E. Cartwright, Division Engineer, for the accompanying plans.



M. R. Thompson, formerly commodore of the Head Line Steamships, died suddenly at Bournemouth, Eng., Oct. 18.

A. E. Stevens, who was appointed, recently, Superintendent district 2, Central Division, C.P.R., at Winnipeg, was born at St. John, N.B., May 1, 1864; entered railway service, 1881, with the Intercolonial Ry. at Moncton, in the Chief Dispatcher's office, remaining there until July, 1886, when he became relay operator on the C.P.R. at Donald, B.C., since which his service has been as follows, all with that company: Jan., 1887, operator and dispatcher at Donald, Vancouver and Kamloops, respectively; Jan., 1903, Chief Dispatcher, Nelson, B.C.; Nov., 1903, trainmaster, Nelson; Jan., 1904, Chief Dispatcher, Vancouver; Nov., 1905, acting superintendent, Revelstoke, B.C.; Jan., 1907, Chief Dispatcher, Vancouver; Sept. 1, 1907, Superintendent district 2, Winnipeg.

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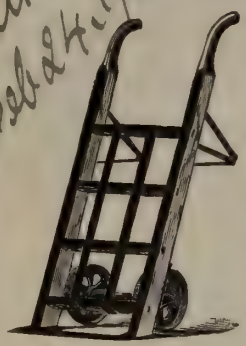

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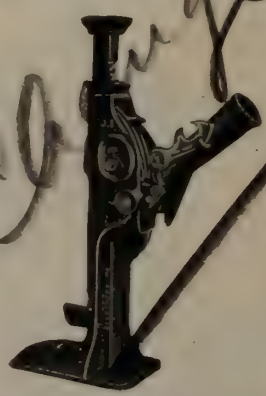

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Complete Pumping Stations

THE CANADIAN FAIRBANKS CO., LTD.

Montreal
Toronto
Winnipeg
Vancouver

Minneapolis, St. Paul, and S.S. Marie Ry.

Following are extracts from the report of this subsidiary company of the C.P.R. for the year ended June 30, presented at the annual meeting in Minneapolis, Minn., Sept. 17:

	1906-07	1905-06
Gross earnings	$12,892,079.03	$11,574,461.99
Operating expenses	7,433,548.79	5,784,559.78
Net earnings	$ 5,458,530.24	$ 5,789,902.21
Income from other sources	52,076.86	62,965.22
Total net earnings	$ 5,510,607.10	$ 5,852,867.43
Fixed charges, taxes, etc.	2,901,921.32	2,585,181.31
Surplus income	$ 2,608,685.78	$ 3,267,686.12

The gross earnings increased $1,317,617.04, or 11.4%. The operating expenses were 57.6% as compared with 50% the previous year, and the fixed charges increased $327,628.37, or 13%. This resulted in a decrease of $331,371.97 in net and $659,000.34 in surplus earnings for the year. The increase in operating expenses was due to increased cost of labor, increased cost of almost every class of material and supplies required in railroad operations and to the fact that, during the winter, throughout Minnesota and Dakota, from November until April, there were unusually heavy snowfalls, which at times made the movement of freight and passengers almost impossible. These conditions, coupled with a general car shortage, also kept the earnings much below what they would have been under normal conditions. The movement of grain traffic for Duluth became very much congested by the inability of connecting lines to handle the business promptly and was a further serious limitation to favorable results. The company is building a line from Brooten, Minn., to Duluth, about one-half of which will be in operation this year, and will be completed in 1908. The rapid growth of business during the past three or four years has required large additions to the equipment and terminal facilities at Minneapolis, St. Paul and other principal points. The funds for these expenditures, to the extent of about $2,700,000, have been advanced, as required from time to time, from surplus earnings. In order to replace these advances and to provide funds for similar and other purposes, it is deemed advisable to increase the capital stock. For this purpose the stockholders, at their annual meeting, will be asked to authorize an amendment to the articles of incorporation, so as to increase the authorized capital from $21,000,000 to $42,000,000, one-third of which will be preferred and two-thirds common stock. It is the intention to issue only so much of this stock as may be necessary to take care of present and future requirements and will probably not exceed $4,200,000, which, before being sold, will be offered to the stockholders at par. The company's roadway, buildings and equipment have been maintained in first-class condition. There is every prospect of a bountiful harvest throughout the Northwest, so that a heavy movement of traffic during the coming year seems to be assured.

The mileage owned and operated is 629.76 miles east, and 1,617.21 miles west of Minneapolis, and 15.91 miles of spur lines, making altogether 2,262.88 miles, against 2,134.73 miles of line, and 18.60 miles of spur lines reported June 30, 1906. In addition the company has trackage facilities over 19.17 miles of terminal property in Minneapolis, St. Paul and Sault Ste. Marie.

EARNINGS AND EXPENSES.

Freight		$ 9,506,447.12
Passenger		2,655.549.19
Mail, express and miscellaneous		730,082.72
		$12,892,079.03
Brought forward		$12,892,079.03
Maintenance of way and structures	$ 1,495,147.09	
Maintenance of equipment	1,440,085.97	
Conducting transportation	4,259,848.00	
General expenses	238,467.73	
		7,433,548.79
Net earnings from operation		$ 5,458,530.24
Interest, discount and exchange	$ 46,552.56	
Interest on bonds and stock	5,524.30	
		52,076.86
Total income		$ 5,510,607.10
Interest on bonds	$ 2,039,640.00	
Interest on equipment notes	48,375.00	
Taxes	705,828.63	
Rental of terminals	108,077.69	
		$ 2,901,921.32
Net surplus for year		$ 2,608,685.78

BALANCE SHEET, JUNE 30, 1907

Cost of road, acquired lines, extensions and equipment		$77,440,869.61
Advances for equipment, terminals, etc.		2,700,000.00
Real estate		146,785.77
Stocks and bonds owned—		
St. Paul Union Depot stock	$ 103,600.00	
Minnesota Transfer Ry. stock	7,000.00	
Western Express Co. stock	25,000.00	
Sault Ste. Marie Bdg. Co. stock	500.00	
Sault Ste. Marie Un. Depot Co. stock	50,590.56	
Treasury stock, this company	225,600.00	
Minnesota Transfer Ry. bonds	29,000.00	
Village of Henning bonds	1,500.00	
Village of Alexandria bonds	10,000.00	
		452,790.56
Materials and supplies		1,488,596.78
Due from—		
Foreign roads	$ 353,557.42	
Agents and conduc'rs	640,362.39	
U.S. Post Office Department	61,947.49	
Bills and accounts receivable	533,682.06	
Cash — Minneapolis, St. Paul, New York and London	2,682,030.88	
Total cash and current assets		4,271,580.24
Other accounts		7,501.72
		$86,508,124.68
Capital stock—		
Common	$14,000,000.00	
Preferred	7,000,000.00	
		$21,000,000.00
Funded debt—		
First mortgage M. & P. Ry. bonds, 4%	$ 306,000.00	
First mortgage M. S. S. & Atl. Ry. bonds, 4%	8,204,000.00	
First mortgage M., St. P. & S. S. M. Ry. consolidated bonds, 4%	41,605,000.00	
Second mortgage M., St. P. & S. S. M. Ry. bonds 4%	3,500,000.00	
		53,615,000.00
Bills payable—		
Equipm't trust notes		1,948,394.97
Interest accrued on bonds due July 1	$ 967,205.00	
Interest accrued on equipment, notes due July 1	48,375.00	
Accrued taxes not yet due	269,535.47	
		1,285,115.47
Current liabilities—		
Vouchers	$ 1,533,587.97	
Pay rolls	627,419.51	
Miscellaneous	62,146.27	
		2,223,153.75
Betterment and improvement fund		252,199.63
Dividends due and unpaid		1,164.50
Income account		6,183,096.36
		$86,508,124.68

TRAFFIC AND MILEAGE STATISTICS.

	1906	1907
TRAIN MILEAGE—		
Freight trains...(miles)	2,812,896	3,163,625
Passenger trains "	1,874,523	2,141,827
Mixed trains "	484,273	304,604
Non-revenue trains "	152,060	162,906
Total train mileage "	5,323,752	5,772,962
CAR MILEAGE—		
Freight—		
Loaded cars north or east	31,000,020	30,921,517
Loaded cars south or west	36,301,543	39,643,428
Empty cars north or east	12,277,415	13,414,052
Empty cars south or west	7,359,056	5,521,145
Total freight car mileage	86,938,034	89,500,142
Passenger coaches, mail and express cars—		
North or east	5,947,222	6,165,507
South or west	5,963,627	6,209,618
Total passenger car mileage	11,910,849	12,375,125
FREIGHT TRAFFIC—		
Tons of revenue freight carried	4,886,498	4,954,177
Tons of non-revenue freight carried	843,543	953,624
Total tons freight carried	5,730,041	5,907,801
Tons of revenue freight carried one mile	1,084,153,866	1,158,634,051
Tons of non-revenue freight carried one mile	190,796,599	168,836,776
Total tons freight carried one mile	1,274,950,465	1,327,470,827
Tons of revenue freight carried one mile per mile of road	536,606	518,985
Tons of non-revenue freight carried one mile per mile of road	94,436	75,627
Total tons (all classes) freight carried one mile per mile of road	631,042	594,612
Average distance haul of one ton revenue freight, miles	221.87	233.87
Average distance haul of one ton freight (all classes)	222.50	224.70
Average amount received per ton for revenue freight	$1.73	$1.92
Average amount received per ton per mile revenue freight	7.81 mills	8.20 mills
Freight earnings per mile of road	$4,205.75	$4,270.13
Freight earnings per train mile	$2.58	$2.74
Average number of freight cars in train	26.37	25.81
Average number of loaded cars in train	20.41	20.35
Average number of tons revenue freight per train (entire line)	328.81	334.07
Average number of tons of non-revenue freight per train (entire line)	57.87	48.68
Average number of tons of all classes freight per train (entire line)	386.68	382 75
Average number of tons revenue freight per train (main line)	382.08	384.53
Average no. of tons revenue freight per train (branch lines)	172.75	202.40
Average no. of tons revenue freight in each loaded car	16.11	16.42
Average no. of tons of non-revenue freight in each loaded car	2.83	2.39
Average no. of tons (all classes) freight in each loaded car	18.94	18.81
PASSENGER TRAFFIC—		
No. of passengers carried earning revenue	1,173,869	1,336,078
No. of passengers carried one mile	111,058,518	116,461,222
No of passengers carried one mile per mile of road	54,969	52,166
Average distance carried (miles)	94.61	87.17
Average amount received for each passenger	$2.07	$1.99
Average rate per passenger mile (cents)	2.19	2.28
Passenger earnings per mile of road	$1,487.83	$1,467.86
Passenger earnings per train mile	$1.27	$1.34
Average no. of passenger cars per train	5.05	5.06
Average no. of passengers per train	47	48

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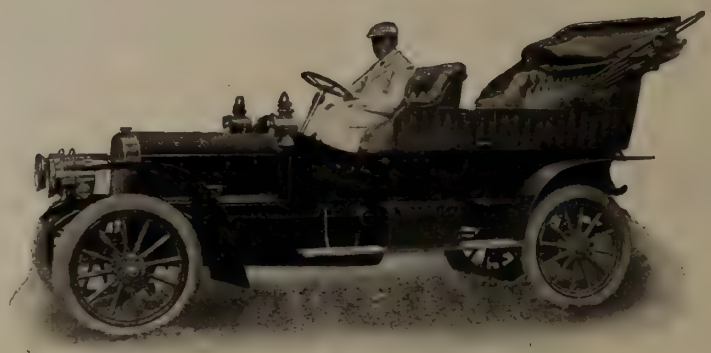

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MISCELLANEOUS—		
Gross earnings per mile of road	$5,728.83	$5,774.73
Operating expenses per mile of road	2,863.09	3,329.70
Net earnings per mile of road	$2,865.74	$2,445.03
Average mileage operated during the year	2,020.39	2,232.50

Following is the percentage of tonnage of the principal commodities handled, the figures in brackets being the percentages for the year ended June 30, 1906: lumber, 33.30 (36.99); grain, 23.37 (23.15); miscellaneous, 6.17 (6.45); flour, 5.54 (6.07); anthracite coal, 5.21 (3.83); merchandise, 4.65 (3.73); coke, 2.80 (1.58); cement, brick and lime, 2.09 (2.04); iron, pig and bloom, 1.77 (1.51); bituminous coal, 1.76 (1.99); ores, 1.62 (1.50); other mill products, 1.20 (1.34); household goods and furniture, 1.16 (3.73).

The expenditure charged to the account for construction and equipment was as follows:

Preliminary surveys	$ 11,483.10
Winnipeg line	13,681.82
Thief River Falls line	354,803.92
Egeland line	58,964.26
Flaxton extension	476,334.10
Garrison extension	1,355,762.88
Underwood extension	1,632.13
Superior line	900,792.81
Frederick extension	1,350.97
Carpio line	162.98
A. B. & N. W. Ry.	569.50
Terminal property, St. Paul, Minneapolis and other points	185,271.94
Betterment to main line	305,092.97
New equipment	2,950,915.07
	$ 6,616,818.45

The expenditures charged to fund appropriated for additions and betterments:

Right of way	$ 23,386.92
Side tracks	36,877.13
Buildings	59,994.13
Fuel and water stations	36,011.98
Shops, engine houses and turntables	38,494.44
Crossing signs and cattle guards	2,098.28
Grade reductions (Minnesota Division)	536,946.97
Filling bridges	17,404.00
Widening and ballasting	125,321.61
Bridges and culverts	63,299.02
Telegraph line	13,805.41
Fencing	2,748.30
Highway grading	630.73
Shop, machinery and tools	928.23
Rails and fastenings—difference between 60-lb. and 80-lb. rails re-laid	59,864.26
	$1,017,811.41
Balance at credit of fund, June 30, '06	$ 470,011.04
Appropriated from surplus	800,000.00
	$1,270,011.04
Deduct expenditures as above	1,017,811.41
Balance forward June 30, 1907	$ 252,199.63

The net amount expended upon rolling stock was $2,950,915.07, the gross being $3,096,692.30, represented by

1,000 box cars	$ 850,518.46
200 flat cars	132,044.89
70 cabooses	97,580.75
75 locomotives	1,207,383.88
23 passenger coaches	183,114.69
8 tourist coaches	90,114.79
2 dining cars	36,909.77
1 buffet car	11,099.41
3 combination cars	17,053.99
14 mail, baggage and express cars	94,710.44
8 sleeping cars	166,483.45
4 observation cars	78,674.53
4 water car tanks	1,519.58
1 snow plow	18,543.12
1 steam shovel	9,845.18
1 wrecking crane	10,945.58
Cinder cars	149.79

The rolling stock owned June 30, included 252 locomotives, 200 passenger cars, 12,949 freight cars, and 176 miscellaneous cars.

The C.P.R. has reduced its transcontinental service to one train a day each way for the winter season. The Overseas Limited will run as usual.

The appeal of Coates, Son & Co., of London, Eng., against the ruling of the Master, in their claim against the Ontario Government, in connection with the sale of T. & N. O. Ry. bonds in 1904-05, came before Justice Teetzel at Toronto, Oct. 22, and the decision not to allow the appellants to amend their petition by the substitution of the word "purchasers" for that of "agents," was reversed. The claim is for $14,800.

Duluth, South Shore and Atlantic Ry.

The report of this subsidiary company of the C.P.R., for the year ended June 30, consists of tabular statements which are printed without comment. The main line owned is 517.44 miles; branch lines owned, 63.60 miles; total owned, 581.04 miles; trackage rights leased, 9.64 miles; total mileage operated, 590.68 miles. The only change from the mileage shown at June 30, 1906, is in the branch lines owned, where there is a decrease of 2.01 miles. The company owns 74 locomotives, 62 passenger cars, 2,880 freight cars, and 100 miscellaneous cars. The new rolling stock added during the financial year was one 85-ton switching locomotive, 100 gondola cars and 10 coal cars. The income account compared with the year ended June 30, 1906, is as follows:

	1906-07.	1905-06.
Gross earnings from operation	$3,311,878.06	$3,057,775 40
Less operating expenses	2,320,857 89	2,057,459.76
Net earnings	$ 991,020.17	$1,000,315 64
Other income	13,654.23	14.536.15
Net income	$1,004,674.40	$1,014,851.79
Deductions from income—		
Interest on bonds	$ 859,700.00	$ 859,700.00
Interest on current liabilities	30,227.51	19,016.67
Taxes	170,282.84	292,471.22
Total	$1,060,210.35	$1,171,187.89
Balance	Deficit 55,535.95	De. 156,336 10

EARNINGS AND OPERATING EXPENSES.

Gross Earnings.	1906-07.	1905-06.
Merchandise freight	$1,759,652.17	$1,641,391.83
Iron ore freight	283,294.33	302,732.95
Passenger	1,098,659.39	951,132.26
Mail	59,470.55	59,698.70
Express	42,532.66	45,763.29
Sleeping and observation cars	35,419.50	32,048.25
Miscellaneous	32,849.46	25,008.12
Total	$3,311,878.06	$3,057,775.40
Operating Expenses.		
Maintenance of way and structures	$ 517,525.70	$ 477,302.50
Maintenance of equipment	301,751.63	265,377.07
Conducting transportation	1,420,227.15	1,234,837.70
General expenses	81,353.41	79,942.49
Total	$2,320,857.89	$2,057,459.76
Net earnings	$ 991,020.17	$1,000,315.64
Percentage of expenses to earnings	70.08	67.29
Gross earnings from operation per mile of road	5,606.89	5,159.20
Operating expenses per mile of road	3,929 13	3,471.39
Net earnings per mile of road	$ 1,677.76	$ 1,687.81
Gross earnings from operation per train mile	$ 1.55212	$ 1.44863
Operating expenses per train mile	1.08768	$ .97472
Net earnings per train mile	$ .46444	$ .47391

The operating expenses include the cost of rebuilding and filling bridges, which for the year ended June 30, 1907, was $5,850, and for the year ended June 30, 1906, was $2,147.

PASSENGER TRAFFIC.

	1906-07.	1905-06.
No. through passengers carried, earning revenue	177,622	148,699
No. local passengers carried, earning revenue	513,963	469,638
Total number passengers carried, earning revenue	691,585	618,337
No. passengers carried one mile	40,284,349	34,413,938
Average distance carried	58.25 miles	55.65 miles
Average amount received from each passenger	$1.55047	$1.49935
Average receipts per mile for through passengers	2.497 cents	2.597 cents
Average receipts per mile for local passengers	2.866 "	2.807 "
Average receipts per passenger per mile for all passengers	2.662 "	2.694 "
Total passenger train earnings	$1.236,082.10	$ 1,088,642.50
Passenger earnings per mile of road	2,092.64	1,836.78
Passenger earnings per train mile	1.32542	1.18742

FREIGHT TRAFFIC.

	1906-07.	1905-06.
No. tons through freight carried, earning revenue	1,435,040	1,305,988
No. tons local freight carried, earning revenue	1,850,435	1,975,518
Total tons freight carried, earning revenue	3,285,475	3,281,506
Total mileage of through freight	156,003,681	144,183,664
Total mileage of local freight	81,876,886	82,488,582
Total freight mileage, or tons carried one mile	237,879,967	227,172,246
Average ton haul for through freight	108.71 miles	110.78 miles
Average ton haul for local freight	44.25 "	41.76 "
Average ton haul for all freight	72.40 "	69.23 "
Average amount received for each ton haul	61.644 cents	58.822 cents
Average receipts per ton per mile for through freight	.781 "	.791 "
Average receipts per ton per mile for local freight	.986 "	.952 "
Average receipts per ton per mile for all freight	.851 "	.85 "
Total freight earnings	$2,042,946.50	$1,944,124.78
Freight earnings per mile of road	3,458.63	3,280.17
Freight earnings per train mile	1.688	1.61

Following is the percentage of the tonnage of the principal commodities handled, the figures in brackets being the percentages for the year ended June 30th, 1906: Ores, 39.76, (43.09); logs, 10.76, (10.74); other forest products, 7.45, (7.63); merchandise, 6.01, (4.37); coke, 5.84, (6.26); stone, sand and other like articles 5.69, (5.10); iron, pig and bloom, 2.52, (1.75); bituminous coal 2.81, (2.99); copper, 1.41, (1.61); cement, brick and lime, 1.22, (0.76); grain, 1.14, (0.84); flour, 1.13, (1.37).

BALANCE SHEET, JUNE 30, 1907.

Cost of road and equipment	$ 46,608,129.76
Mackinaw Transportation Co	237,371.70
Lake Superior Terminal & Transfer Ry	29,488.28
Lake Michigan and Lake Superior Ry	7,662.68
S. S. Marie Bridge Co	250.00
Mineral Range Rd. Co	532,295.00
Sainte Marie Union Depot Co	57,198.58
Western Express Co	25,000.00
South Shore Land Co., Ltd	3,000.00
Minnesota extension	16,766.63
E. W. Allen, treasurer	106,227.70
Sundry account ledger	164,381.52
Rent ledger	499.90
Station ledger	304,133.98
Western Express Co. (current account)	16,678 85
Post Office department	14,715.46
Material	285,921.00
Profit and loss	2,672,292.27
	$ 51,082,013.31
Common capital stock	$12,000,000.00
Preferred capital stock	10,000,000.00
D., S.S. & A. consols, 4% gold bonds	15,107,000.00
D., S.S. & A. 1st mortgage 5% bonds	3,816,000.00
M. H. & O. 6% bonds of 1925	1,077,000.00
Income certificates	3,000,000.00
Car trust notes, 5th series	236,213.19
Car trust notes, 7th series	130,032.06
Car trust notes, 8th series	192,066.67
C.P.R. guaranteed interest advances	4,193,675.18
C.P.R. general account	187,988.29
South Shore Land Co	200,007.82
M. H. & O. lands	5,820.41
Bills payable	10,500.00
Vouchers payable	225,383.06
Labor	191,661.98
Coupon ticket ledger	124,062.25
Car service ledger	23,614.55
Accrued interest on bonds	267,938.33
Accrued taxes	93,045.52
	$ 51,082,013.31

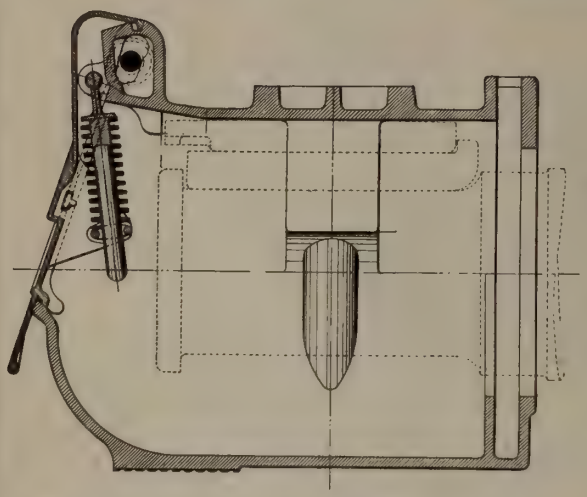
During the year $186,412.35 was charged to construction as follows: New buildings, $21,423.44; new ore dock no. 5, at Marquette, $133,556.40; reducing grade at Strongs, $1,995.79; new fence, $1,568.44; new branches and sidings, $27,768.28; miscellaneous, $1,425; from which there was deducted $1,325, amount received for insurance on buildings burned.

K. L. Chipman, heretofore chief clerk in the Dominion Atlantic Ry. office, New York, has been appointed Superintendent of the baggage and freight department of the Cook and Son tourist agency, New York.

V. I. Smart, who has been appointed Assistant Professor of the department of railways in the faculty of Applied Science at McGill University, Montreal, will have charge of the courses in railway engineering, operating and signals. This is a new course of instruction.

THE McCORD MALLEABLE IRON JOURNAL BOX

MANUFACTURED IN CANADA



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The McCORD Draft Gear
The McCORD Spring Dampener

The McKIM Gasket
The McCord Force Feed Lubricator

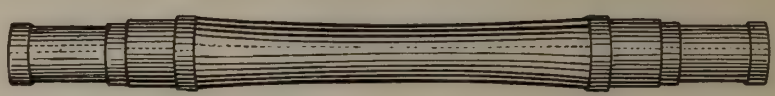
McCORD & COMPANY
Old Colony Building, Chicago

N.J. HOLDEN CO., Ltd.,
302 St. James Street, Montreal

THE HAMILTON STEEL & IRON CO.

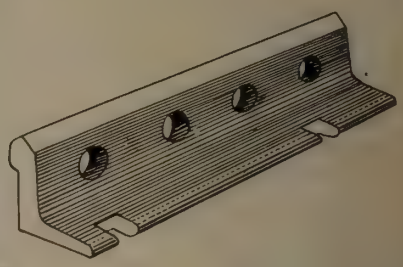
LIMITED

HAMILTON, CANADA.



AXLES

CAR AND LOCOMOTIVE



Railway Angle Bars and Track Spikes

FORGINGS MARINE AND RAILROAD

Pig Iron, Iron and Steel Bars

Railway Rolling Stock Notes.

The G.T.R. has placed an order for 25 first-class cars in the U.S.

The Canadian Copper Co., Sudbury, Ont., has placed an order for two locomotives in the U.S.

The White Pass and Yukon Ry. is arranging to build a number of ore cars of a special design at its own shops.

The Crossen Car Mfg. Co., of Cobourg, Ltd., has on hand orders for 20 coaches for the C.N.R., and 400 box cars and 4 conductors' vans for the Intercolonial Ry.

The Intercolonial Ry. has placed orders for 12 hopper cars, 30,000 lbs. capacity, and 70 dump cars, 80,000 lbs. capacity, with Rhodes, Curry & Co., Amherst, N.S.

The Temiskaming and Northern Ontario Ry. has received 2 second-class passenger coaches and 3 workmen's cars from the Crossen Car Mfg. Co., of Cobourg, Ont.

The G.T.R., we are advised, placed orders for 20 compound consolidation, 10 mogul, 10 switching, and 10 ten-wheel passenger locomotives, in Sept., for delivery early in 1908.

The Locomotive and Machine Co. of Montreal recently completed four 4-6-0 locomotives for the Delaware and Hudson Rd.'s Canadian line, and 10 locomotives, 2-8-0 type, for the C.P.R. During Sept. it completed five consolidation and 11 ten-wheel locomotives for the C.P.R.

The Intercolonial Ry. has purchased in the U.S. a steam motor car, for use in suburban service in the neighborhood of St. John, N.B. The car, as described in the press, has accommodation for 40 passengers, including 8 in a smoking compartment, and a baggage room, lighted by acetylene gas, and propelled by a 120 h.p. motor.

The Temiskaming and Northern Ontario Ry. has received two auxiliary boarding cars from Rhodes, Curry & Co., Amherst, N.S.; 90 steel underframe flat cars, 100,000 lbs. capacity, on an order for 100 from the Dominion Car and Foundry Co., Montreal; one Russell wing snowplow, and 80 flat cars, 60,000 lbs. capacity, completing an order of 100.

The C.P.R. between Sept. 18 and Oct. 12 has placed the following orders for rolling stock: 1 consolidation locomotive, 1 colonist car, 60 box cars, 2 refrigerators, freight; 1 refrigerator, passenger; 5 stock cars, 40 flat cars, and 1 Hart ballast car, at its Angus, Montreal, shops; 2 vans at its Farnham, Quebec, shops; and 3 steel coal cars with the Dominion Car and Foundry Co., Montreal.

The C.P.R. received the following additions to rolling stock between Sept. 18 and Oct. 12: 519 box cars, 16 first-class cars, 4 tourist cars, 7 switching locomotives, from its Angus, Montreal, shops; 89 steel ore cars from the Dominion Car and Foundry Co., Montreal; 14 freight and passenger locomotives from the Locomotive and Machine Co., Ltd., Montreal; and 147 box cars from the U.S.

The Canadian Northern Ry., between Aug. 15 and Sept. 15, received the following rolling stock: Seven 10-wheel locomotives from the Canada Foundry Co., Toronto; five consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont.; 93 stock cars from the Crossen Car Manufacturing Co., Cobourg, Ont.; two passenger coaches, 10 refrigerator cars and 277 box cars from Rhodes, Curry & Co., Amherst, N.S.; and one cafe car from the U.S.

Following are the principal dimensions of the snowplow for which the C.P.R. recently placed an order with the Locomotive and Machine Co. of Montreal: Width of drum, 10 ft. outside; width of cut, 12 ft.; rotary wheel, 9 ft. 8½ in.; boiler, 60 in. diameter outside first course; firebox, 92 by 50 in.; working pressure, 190 lbs.; cylinders, 17 by 22 in.; diameter of truck wheels, 4 ft. 6 in.; center to center of trucks, 15 ft. 2½ in.; extreme length of rotary, 38 ft. 3 in.

The C.N.R. between Sept. 15 and Oct. 15 has received the following additions to rolling stock: 74 stock cars, 4 baggage cars and 4 mail and express cars, from the Crossen Car Mfg. Co., of Cobourg, Ont.; 346 box cars, 7 refrigerator cars, and 1 coach from Rhodes, Curry & Co., Amherst, N.S.; 5 10-wheel locomotives from the Canada Foundry Co., Toronto, and 2 10-wheel locomotives and 11 consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont.

Following are the principal dimensions of the 30 eight-wheel locomotives for which the G.T. Pacific Ry. recently placed an order with the Locomotive and Machine Co. of Montreal, delivery to commence Mar., 1908:

WEIGHT.—On drivers, 80,000 lbs.; total, 120,000 lbs.
WHEELS.—Diameter of drivers, 63 in.
WHEEL BASE.—Driving, 8 ft. 6 in.; engine, 23 ft.; engine and tender, 54 ft.
CYLINDERS.—Diameter, 18 in.; stroke, 24 in.
BOILER.—Type, extended wagon top; working pressure, 200 lbs.
TUBES.—Number, 249; diameter, 2 in.; length, 12 ft.
FIREBOX.—Length, 96⅛ in.; width, 40¼ in.
TENDER.—Capacity, 10 tons coal and 7,000 U.S. galls. water.

Following are the general dimensions of the 20 consolidation locomotives for which the G.T.R. has placed an order with the Locomotive and Machine Co. of Montreal, delivery to commence Aug., 1908:

WEIGHT.—On drivers, 179,500 lbs.; total, 206,000 lbs.
WHEELS.—Diameter of drivers, 63 in.
CYLINDERS.—22½ x 35 x 32 in.
BOILER.—Type, extended wagon top; working pressure, 210 lbs.
TUBES.—Number, 353; diameter, 2 in.; length, 15 ft.
FIREBOX.—Length, 96⅛ in.; width, 75¼ in.
WHEEL BASE.—Driving, 17 ft.; engine, 25 ft. 9 in.; engine and tender, 56 ft. 11½ in.
TENDER.—Capacity, 12 tons of coal and 7,000 U.S. galls. water.

The Montreal Harbor Commissioners have placed an order with the Canadian Locomotive Co., Ltd., Kingston, Ont., for 3 switching locomotives, to the following specifications: gauge, 4 ft. 8½ ins.; type of engine, 2-6-2, side tank; fuel used, bituminous coal; weight, total, 140,000 lbs.; wheel base of engine, rigid, 10 ft., total, 25 ft. 3½ ins.; heating surface, firebox, 97 sq. ft.; tubes, 1,245 sq. ft.; total, 1,342 sq. ft.; diam. of driving wheels, 51 ins.; driving wheel centers, cast iron; diam. of cylinders, 18 ins.; stroke, 24 ins.; type of boiler, radial stay; working pressure, 190 lbs.; no. of tubes, 200; diam., 2 ins.; length, 10 ft. 11 ins.; brakes, Westinghouse; tank capacity, 1,200 imp. galls.

Following are some of the specifications of the 10 passenger locomotives which the C.P.R. is building at its Angus, Montreal, shops:

CLASS.—G. 2.
TYPE.—Pacific, 4-6-2.
SUPERHEATER.—Simple, Vaughan and Horsey type.
WEIGHT.—On drivers, 139,300 lbs.; total, 212,300 lbs.
CYLINDERS.—Diameter, 21 in.; stroke, 28 in.
WHEELS.—Diameter of drivers, 69 in.; centers, cast steel; tyres, Krupp crucible steel; springs, C.P.R. crucible steel.
BOILER.—Type, extended wagon top; working steam pressure, 200 lbs.; heating surface, 2,957 sq. ft.
TUBES.—Number, 22 of 5 in., and 193 of 2¼ in.; length, 19 ft. 6 in.
FIREBOX.—Length, 7 ft. 10⅛ in. inside; width, 5 ft. 9⅞ in., inside; grate area, 45.6 sq. ft.
TENDER.—Capacity, 10 tons coal and 5,000 imp. galls. water.
SPECIAL EQUIPMENT.—Westinghouse air brakes, Simplex brake beams, Tower couplers, Pyle National electric headlight, Gold steam heat equipment.

A. Mahieu, a conductor on the C.N.R., was sentenced to one month's imprisonment at Montreal, Oct. 23, for being intoxicated while in charge of a freight train.

MAINLY ABOUT PEOPLE.

W. Mackenzie, President C.N.R., sailed from New York recently for England.

H. D. P. Brady, head of the firm of Brady and Son, shipbuilders, Montreal, died there Oct. 8, aged 79 years.

H. R. Charlton, advertising agent, G.T.R. has been elected a member of the Canadian Camp Club, New York.

Mrs. Drolet, who died at St. Sauveur, Que., recently aged 58, was wife of F. X. Drolet, Master Mechanic, C.P.R.

E. Tiffin, Traffic Manager Canadian Government railways, has returned to Moncton, N.B., from a trip to London, Eng.

Mrs. Ryan, who died at Ottawa, Sept 24, was mother of P. E. Ryan, Secretary of the Commission of the Transcontinental Ry.

Jas. Conlon, Superintendent of the electrical department of the Michigan Central Rd., St. Thomas, Ont., died there recently.

R. Percival, conductor on the G.T.R., who died Oct. 10, at Cornwall, Ont., aged 64, had been in the G.T.R. service for 47 years.

Mrs. Wragge, wife of E. Wragge, C.E., formerly Local Manager G.T.R. at Toronto, died there Oct. 1, aged 63, after a long illness.

Hon. G. Graham, Minister of Railways and Canals, has been given the honorary degree of LL.D. by Queen's University, Kingston, Ont.

W. R. Hill, for many years conductor on the Toronto-Montreal run for the G.T.R., died in Toronto, Oct. 5, after two years' illness.

W. Kearney, who died at Montreal, aged 84, Oct. 2, was engaged in railway service for over half a century, principally at St. John's, Quebec.

Miss B. Crean, who died at South Quebec recently, was sister of M. W. Crean, Superintendent of the Dominion Government Telegraphs.

C. J. Booth, son of J. R. Booth, Ottawa, who built the Canada Atlantic Ry., was married at Petrolia, Ont., recently, to Miss J. L. Gibson.

J. M. Millar, civil engineer, National Transcontinental Ry., Edmundston, N.B., was married, Oct. 17, to Miss A. M. Miller, of Halifax, N.S.

G. Bawden, Secretary-Treasurer of the Thousands Islands Steamboat Co., was married to Miss F. E. Carrington, at Kingston, Ont., Oct. 2.

R. C. W. McCuaig, who occupied the position of measuring surveyor of shipping for the Dominion, died at Ottawa, Oct. 23, aged 73 years.

Sir H. Montagu Allan was elected a director of the Dominion Iron and Steel Co., Ltd., recently, in place of Sir Henry M. Pellatt, resigned.

The estate of P. Larson, of Foley Bros. & Larson, railway contractors, is reported by the appraisers at Helena, Mont., to be worth, approximately, $15,000,000.

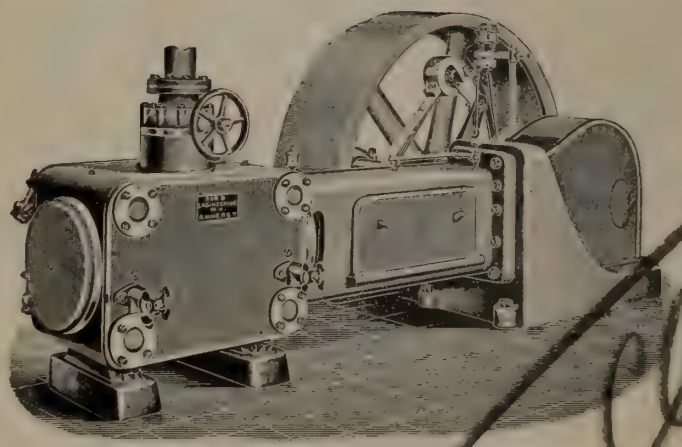
G. M. Bosworth, Fourth Vice-President C.P.R., Mrs. and Miss R. Bosworth, left Montreal, Oct. 1, for a lengthened trip to Vancouver and Pacific Coast points.

D. W. Hatch, Travelling Passenger Agent Atchison, Topeka and Santa Fe Rd., Montreal, and Mrs. Hatch, celebrated the 47th anniversary of their marriage, Oct. 12.

C. D. Strong was presented with a travelling bag by the officials of the C.P.R. General Passenger Agents' Office, Montreal, Oct. 1, on being transferred to St. John, N.B.

J. O. Labreque, Purchasing Agent of the St. Lawrence Canadian Navigation Co., and formerly of the Richelieu and Ontario Navigation Co., died at Montreal recently.

ROBB POWER PLANTS



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HIGH SPEED VERTICAL ENGINES
MEDIUM SPEED HORIZONTAL ENGINES
ROBB-MUMFORD BOILERS
RETURN TUBULAR BOILERS
WATER TUBE BOILERS

ROBB ENGINEERING CO., LIMITED, AMHERST, N.S.

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N. CURRY, President
N. A. RHODES, Vice-President

CAPITAL, $1,000,000

J. M. CURRY, Sec.-Treas.

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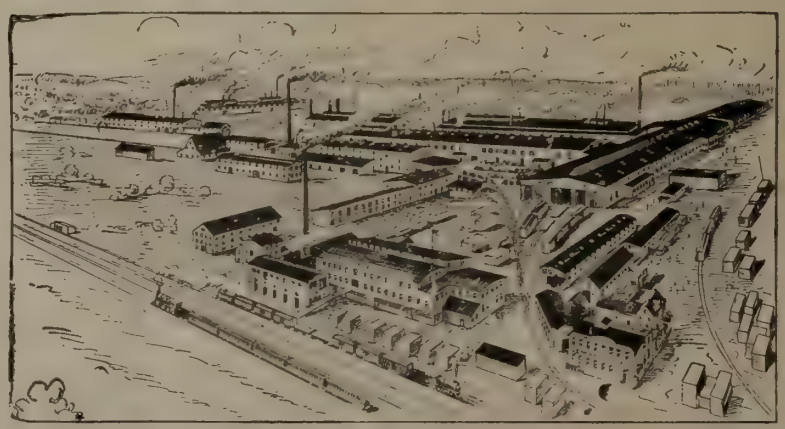
AMHERST, NOVA SCOTIA LIMITED

RAILWAY AND STREET CARS

SPECIAL CARS FOR ALL PURPOSES

Capacity per Month

300 Freight Cars
4 Passenger Cars
4 Snow Plows
3,000 Car Wheels



Capacity per Month

2,500 Car Axles
500 Tons Castings
1,000 Tons Forgings
1,000 Tons Bar Iron and Steel

Car Wheels, Axles, Forgings, Castings, Bar Iron & Steel, Etc.

J. R. Marlow has been presented with a gold watch, chain and locket on resigning his position as transportation officer of the Canadian Manufacturers' Association, Toronto.

W. Mackenzie, President C.N.R., has declined, owing to numerous other duties, the position of Trustee of Queen's University, Kingston, Ont., to which he was recently elected.

G. E. Drummond, of Drummond, McCall & Co., and an ex-President of the Montreal Board of Trade, has been elected a director of Molsons Bank, in place of F. C. Henshaw, deceased.

A. McMaster, for a number of years engaged in the contracting business, was formerly a master mariner and was in command successively of the steamers Virginia and Polino.

F. Thomas, architect, who died in London, Eng., aged 67, Oct. 13, was engaged as Government Inspector during the construction of what is now the C.P.R. line between Ottawa and Quebec.

W. Aldred, who was in command of the G.T.R. car ferry Great Western for fifteen years, but who retired from active work about twelve years ago, died at Windsor, Ont., Oct. 11, aged 77.

D. B. Swinton, who has been appointed assistant general foreman Dominion Car and Foundry Co., was recently presented with a cabinet of cutlery by his former associates in the Canada Car Co.'s works, Montreal.

J. A. M. Aikins, K.C., C.P.R. solicitor at Winnipeg, has been named chairman of the commission recently appointed by the Manitoba Government to investigate the university question in the province.

W. P. Fitzsimons, until recently Manager of the Lackawanna, Grand Trunk Fast Freight Line, at Chicago, is now Manager of the Detroit, Mich., Board of Commerce, Bureau of Transportation and Manufactures.

Alexander McMurray, who died recently at Bridgeport, Ont., aged 80 years, was one of the oldest Niagara River pilots, having owned and operated steamboats since 1845. He retired from the service ten years ago.

G. T. Bell, General Passenger and Ticket Agent G.T.R., was elected Vice-President of the American Association of General Passenger and Ticket Agents at the annual convention held at Washington, D.C., Oct. 16.

R. Miller, station master at the C.P.R. Windsor St. station, Montreal, is spending a two months' vacation in New Brunswick. Mr. Miller's health was not fully re-established as the result of a trip to the old country in the spring.

A report states that D. R. Proctor, who was found dead in a cheap lodging-house in Chicago, Ill., at the age of 81, made a fortune from an invention for extinguishing sparks from locomotives, thus preventing prairie fires.

J. O'Hagan, recently appointed to a position in the newly organized publicity department of the C.N.R., was presented by the editorial staff of the Toronto Globe with a tea set, on his relinquishing the post of private secretary to the editor.

L. F. Vernon-Harcourt, whose works on Rivers and Canals and Harbors and Docks are well known amongst civil engineers in the Dominion, Professor of Civil Engineering at University College, London, Eng., died there Sept. 14, aged 68.

Miss M. E. L. Osler, youngest daughter of E. B. Osler, M.P., director C.P.R., was married in Toronto, Sept. 25, to G. S. Gibbons, of London, Ont., son of G. Gibbons, K.C., chairman of the Canadian section of the International Waterways Commission.

E. Pepper, of the Niagara, St. Catharines and Toronto Ry., was presented by a number of representatives of transportation companies in Toronto with an easy chair and cut glass water set and berry bowl, on the occasion of his marriage to Miss K. McPherson, St. Thomas, Oct. 23.

Mrs. Renton, widow of G. Renton, travelling engineer G.T.R., who was killed in Feb., in a wreck at East London, Ont., is suing the company for $25,000 damages. It is alleged that the accident was caused by the company neglecting to place a competent man in charge of the switching.

Judge S. W. and Mrs. Foster celebrated their golden wedding at Knowlton, Que., Sept. 30. Mr. Foster successfully brought about the construction of the Montreal and Champlain Ry., the United States and Canada Ry., and the Orford Mountain Ry. He is president of the two latter.

Miss Van Horne, daughter of Sir William Van Horne, had a rather narrow escape from drowning recently, at her father's summer home, Minister's Island, N.B. While stepping from the yacht Covenhoven to a small boat she missed her footing and fell into the water, and was only rescued after considerable difficulty.

C. B. Foster, C.P.R. District Passenger Agent, and Mrs. Foster, and W. T. Dockrell, C.P.R. travelling passenger agent, and Mrs. Dockrell, Toronto, were each the recipient of an article of cut glass at a gathering of a number of members of the Canadian Ticket Agents' Association at the C.P.R. passenger office, Toronto, Oct. 19.

A. W. Dow was presented with a gold locket and chain by the freight staff at Bonaventure Station, Montreal, on resigning after forty-three years' service with the G.T.R. Mr. Dow, at the time of his retirement, was chief clerk in the freight department, and has since left Montreal on a trip to the Northwest and Pacific Coast points.

G. M. Jackson, who has been appointed Travelling Passenger Agent C.P.R., at Spokane, Wash., was born at Lakeland, Minn., Oct. 20, 1880, and entered transportation service in 1901, his record being: Sept., 1901, to Oct., 1903, clerk in city ticket office Oregon Ry. and Navigation Co., and Southern Pacific Ry., Tacoma, Wash.; Oct., 1903, to Nov., 1904, clerk in city ticket office C.P.R., Tacoma, Wash.; Nov., 1904, to Jan., 1906, clerk in Southern Pacific Ry. city ticket office, Seattle, Wash.; Jan., 1906, to Sept., 1907, city ticket agent, C.P.R., Seattle, Wash.

H. E. Whittenberger, who has been appointed Superintendent Eastern Division G.T.R., Montreal, was born at Peru, Ind., Nov. 9, 1869, and entered transportation service in 1885, his record being: 1885 to Feb., 1897, various positions, Wabash Rd.; Feb., 1897, to May, 1902, Trainmaster Middle Division, G.T.R.; May, 1902, to Sept., 1904, Superintendent Denver and Rio Grande Ry.; Sept., 1904, to Jan., 1906, Superintendent Cincinnati, Hamilton and Dayton Rd., Indianapolis, Ind.; Jan., 1906, to Sept. 30, 1907, Superintendent Kansas City and Southern Rd.

Lieut.-Col. Henshaw, who died in Montreal, Oct. 2, was largely interested in financial and banking circles, and was associated in an official capacity with a number of transportation and industrial companies. He was President of the Canadian Marconi Wireless Telegraph Co., and the Canadian Transfer Co.; Vice-President of the Caledonia Iron Works, and a director of the Canadian Iron and Foundry Co., Intercolonial Coal Mining Co., Montreal Park and Island Ry., Montreal Street Ry., Richelieu and Ontario Navigation Co., and Suburban Tramway and Power Co.

W. J. Flynn, who has been appointed Division Master Mechanic, Michigan Central Rd., St. Thomas, Ont., was born in Buffalo, N.Y., June 24, 1877, and entered railway service in 1899, his record being: Sept., 1899, to Sept., 1900, chief draughtsman, mechanical department C.L. and W. Ry., Loraine, Ohio; Sept., 1900, to Mar., 1902, chief draughtsman in office of Mechanical Engineer Michigan Central Rd., Detroit, Mich.; Mar., 1902, to Sept., 1904, assistant general foreman, Michigan Central Rd. shops, Jackson, Mich.; Sept., 1904, to Sept., 1907, general foreman Jackson shops, M.C.R.

G. W. Caye, who was recently appointed Assistant to the Vice-President and General Manager, G.T. Pacific Ry., at Winnipeg, entered railway service in 1882, since which he has been consecutively office boy, General Passenger Department Central Vermont Ry., St. Albans, Vt.; 1883 to 1885, stenographer same office; 1886 to 1896, chief clerk General Ticket Department, same road; 1897 to 1900, chief clerk to General Superintendent, same road; 1901 to 1903, travelling car agent, Canada Atlantic Ry.; 1903 to 1904, private secretary to General Manager same road, at Ottawa, Ont.; 1905 to 1907, chief clerk to Vice-President and General Manager G.T. Pacific Ry., Montreal; since then Assistant to Vice-President and General Manager, same road, at Winnipeg.

R. Nelson, who has been appointed Assistant Chief Dispatcher, Canadian Northern Ry., Dauphin, Man., was born at Barrie, Ont., July 6, 1864, and entered transportation service 1891, his record being: May, 1891, to Jan., 1894, telegraph operator Western Division C.P.R.; May, 1894, to Dec., 1894, telegraph operator Wisconsin Central Ry.; May, 1895, to Aug., 1898, operator, cashier and agent at various points Ashland Division, Chicago and North-Western Ry.; Aug., 1898, various positions on Northern Pacific Ry. in Manitoba, and remained on with the Canadian Northern Ry. when that company took over these lines; June, 1901, to Sept., 1904, train dispatcher C.N. Ry., Winnipeg; Sept., 1904, to Sept., 1907, train dispatcher C.N. Ry., Dauphin, Man.

W. C. Hunter, Manager of the New Brunswick Coal and Ry. Company, whose portrait appears on the first page of this issue, was born at St. John, N.B., Jan. 4, 1865. He entered the Intercolonial Ry. service there, June, 1882, as a car oiler, became in time locomotive wiper, fireman and engineman, and was appointed General Air Brake Inspector Nov. 1, 1901, resigning in June, 1904, to become Manager of the N.B.C. & R. Co. This railway was a run-down concern, about ready to close up when he was appointed. In three years it has risen to become the most important branch railway in New Brunswick. In 1906 a surplus of $2,224.73, as compared with a loss of $24,596.31 in 1904 was shown, the business of the railway increasing from 17,847 tons of freight and 10,000 passengers in 1904, to 38,731 tons and 14,000 passengers in 1906. The railway has been thoroughly repaired, and its rolling stock increased, a machine shop installed, and it is generally a going concern. Mr. Hunter is Second Vice-President of the Air Brake Association and takes a prominent part in its work.

In response to a question as to his views on the condition of the engineering trades, F. Nicholls is reported to have said, Oct. 24: "The volume of production may be curtailed, but not much. Comparatively to a far smaller extent in Canada to what may prevail in the United States, for the reason that we have a Government that is committed to the building of the Transcontinental railway, and the Grand Trunk Pacific, which have already been financed."

HUDSON HIGH POWER STEEL

Best for Locomotive and General Shop Work

Unequalled for all kinds of cutting tools. The best steel makes the best tools, that is the reason that Hudson Tools will run faster and wear longer than any other high speed tools.

PROFITS GROUND AWAY

The time your men will save in grinding alone is the practical economy of Hudson High Power Steel. Complete line of Twist Drills, Milling Cutters, End Mills, Taper Bridge Reamers, Shell Reamers, carried in stock. All steel and tools guaranteed.

BALDWIN STEEL COMPANY

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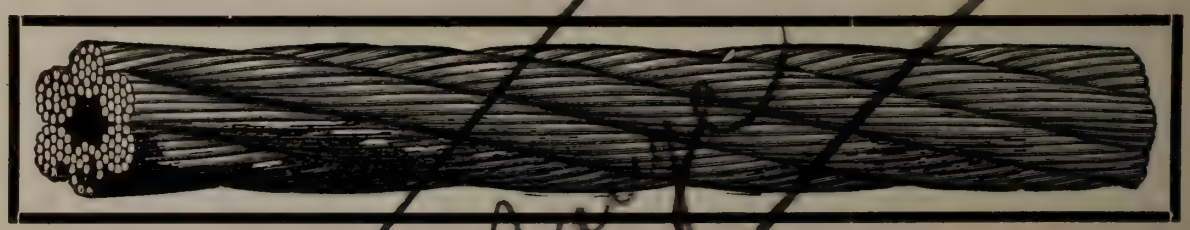

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Canadian Ticket Agents' Association.

The annual trip of this Association, which was held in Oct., extending to Winnipeg, while not as largely attended as some others, was one of the most enjoyable; excellent train arrangements, perfect weather, and lavish hospitality at Winnipeg, and also at Port Arthur and Fort William, combining to make it a record one in many respects. The members and their guests assembled at the Union Station, Toronto, on Oct. 10, leaving there at 10 p.m., over the G.T.R., in a special train of five C.P.R. sleeping cars and a baggage car for North Bay, Ont., which was reached about 6 a.m. Oct. 11. The party was joined there by a number of members from Montreal and other eastern points, the sleeping car in which they had travelled from Montreal being attached to the special train. Two C.P.R. dining-cars were also attached, and from North Bay the special, consisting of nine vestibuled cars, ran through solid to Winnipeg. North Bay was left on Oct. 11 about noon, Port Arthur being reached at 8 a.m., Oct. 12. The special was met by F. J. Sutton, C.P.R. agent, and others, and the whole party debarked, and after a short stroll about town were conveyed in special cars of the Port Arthur Electric Ry. through Fort William to West Fort. Returning, some of the party went on the steamboat James Whalen on the Kaministikwia River to view the harbor, mammoth grain elevators, etc. The party were divided for luncheon between Fort William and Port Arthur, being the guests of the citizens of both places. At 3 p.m. they left on a special Canadian Northern Ry. train for Kakabeka Falls, the great beauty of which was a revelation to the visitors. Additional interest was given to this portion of the trip by the opportunity afforded of seeing the Kaministikwia Power Co.'s plant, where 30,000 h.p. is being developed, which it is intended ultimately to increase to 100,000 h.p. The power is already being supplied to the dual cities, and will be a most important factor in their development.

At Fort William the party were met by a delegation of about 20, headed by C. E. McPherson, General Passenger Agent C.P.R. Western Lines, who came from Winnipeg by special car and extended a cordial welcome to the visitors. The special left Fort William at 7 p.m., Oct. 12, but owing to some delay during the night Winnipeg was not reached till shortly after noon on Sunday, Oct. 13, when the party landed in the new train shed and walked into the C.P.R.'s luxurious Royal Alexandra Hotel, the management of which had made most perfect arrangements for their reception. Chief Clerk Cummings met the special at Fort William, and saw members of the party who had reserved rooms, giving the numbers of the rooms and labelling the baggage, so that on reaching Winnipeg the members went direct to their rooms without having to register or ask for keys. The service at the hotel was most satisfactory throughout the visit, the Manager, H. W. Wills, and his staff, being unremitting in their attention.

THE TWENTY-FIRST ANNUAL MEETING

On Oct. 14 at 9.30 a m. the members assembled in a portion of the Royal Alexandra rotunda, which had been reserved for them, President McIlroy in the chair. Acting Mayor Davidson extended them a hearty welcome to the city, and was followed by Alderman Cox. President McIlroy, in responding, said the visitors had been astonished at the many signs of prosperity, and were agreed in thinking that Winnipeg was destined to be the metropolis of Canada, surpassing all other cities of the Dominion. The city was widely known for its open-hearted hospitality, and the reception to the agents was in accordance with this reputation. When they returned to the east, they would advise their friends of its attractions and would direct intending settlers to the Northwest.

The roll-call showed 61 members in attendance. Letters of regret at inability to be present were read from C. E. E. Ussher, Assistant Passenger Traffic Manager C.P.R., and W. Stitt, General Passenger Agent C.P.R. Eastern Lines. Mr. Ussher, in the course of his letter, referred to the alarmist reports that appear periodically in certain Canadian newspapers, and which do untold harm, not only to the western provinces, but to the east as well. He said: "The interests of the western provinces cannot be hurt without at the same time hurting the eastern provinces, and a great deal can be done to overcome this by the action of the members of your Association, who meet all classes of the community and especially newspaper editors and proprietors. In every way the entire sentiment and talk of a growing country like Canada should be optimistic. We have no place for the pessimist!" A telegram from J. J. McConniff, Montreal, was read expressing the regret of many Montrealers at being unable to attend. He expressed his hope that the resolution in favor of the 24 hours system of time would carry, and said that J. M. Lyons, General Passenger Agent I.C.R., suggested its adoption in schools. J. P. Hanley, Kingston, Ont., Third Vice-President of the Association, wired his regrets, and W. Whyte, Second Vice-President C.P.R., telegraphed from North Bend, B.C., regretting his inability to attend the dinner.

In introducing C. E. McPherson, General Passenger Agent C.P.R. Western Lines, President McIlroy spoke of the pleasant recollections of him in Ontario, and he was accorded a very hearty reception. Mr. McPherson said that he was the last person on earth who should be called on to make an address on such an occasion, the retiring and shy nature of his disposition being known to all his friends. He warned the agents of the danger of going through the western provinces, since those who once saw the west thoroughly could never be satisfied in the east. The movement of passengers from the east to the west continued very large, but he wished to say that this country did not want knockers, grouchers or pessimists. There should be a law to forbid the entrance of such people. He had been brought up to sell tickets, and sold them still. He had known many of the members of the Association for many years, and had had the pleasure of extending a welcome to them when the annual meeting was held in Winnipeg in 1899. A good time was had then, and he believed that as good a time would be had this year.

W. Jackson, in E. de la Hooke's absence, read the Secretary-Treasurer's report as follows:

"At our last annual meeting I had the pleasure of announcing that we had a membership of 210, a record number; this year's roll shows only 205, a shrinkage of five, and this in face of 22 new members having joined, thereby showing that no less than 27 have failed to pay up. It is a most undesirable state of affairs. There are too many agents who temporarily join the Association for the purpose of going on some particular trip that takes their fancy; having enjoyed the privileges thereof, they drop out. It often occurs, as it did this year, that members who so act desire to return to the fold that they may join in another outing and expect to be reinstated on the same terms as a new member would be admitted, viz., on the payment of $3. This, in face of by-law 4, governing the re-admission of members, cannot be done. A member who voluntarily withdraws from membership can only be restored by payment of all arrears incurred since his defaulting, I cannot say resignation, because no one ever takes the trouble to resign. The by-law was framed purposely to guard against such unfair proceedings and is being strictly enforced. How much better for an agent, once a member, to continue as such by paying his annual subscription regularly. It is only $2 a year, for which is he not only a member, but is sent monthly a copy of our official organ, THE RAILWAY AND MARINE WORLD, published at $1 a year, and which every man engaged in the transportation business can read with much profit and general enlightenment, on railway and shipping advancement. During the year, 183 members renewed their subscriptions, 22 new members joined, together realizing $434; this with a balance of $221.98 brought forward from last year, and a credit balance of $74.55 from the Mobile-New Orleans outing fund, raises the total receipts to $730.53. Expenses were $515.38, leaving a balance of $215.15 to be carried forward to 1908. Balance sheets, vouchers and accounts have been audited and certified to by Auditor Hodgens, and are open for inspection. I very much regret that circumstances prevented my being with you in this your 21st annual convention. It is my second enforced absence in that time. I hope for better luck next year."

The report was unanimously adopted.

President McIlroy read the following address: "It affords me great pleasure to greet you on this the 21st annual meeting of the Association. Eight years ago we held our yearly meeting in this the now great city of Winnipeg, and that visit has certainly helped, as you have no doubt already observed, in making Winnipeg what she is to-day. Thousands of the citizens of Winnipeg, and now prosperous farmers of Manitoba and the Territories, have been ticketed by members of this Association, and another visit such as this tends but to refresh our memories, and will no doubt again prove beneficial to Winnipeg, Manitoba and the Northwest, for who comes in touch with prospective settlers more than the ticket agents who form this Association. So we warn the people of this fertile section of our great Dominion to be on the outlook for an inrush of settlers in 1908. One and all cannot fail to note what great progress Winnipeg has made since our visit eight years ago, and to be convinced that she is destined to be the great city of the Dominion of Canada, not even excepting Montreal, which city, as one of our eastern members claims is, 'Pretty good for Quebec.'

"I would ask you all to consider carefully a motion which will be put before you at this meeting, recommending the use of the 24 hour system of notation of time, by the Canadian railways operating from Port Arthur east, such as is used by the lines operating west of Port Arthur. The adoption of such a time system would, to my mind, greatly improve the present railway time table east of Port Arthur, especially so to the understanding of the travelling public.

"I would also draw your attention to the fact that if there is a suggestion that any member of this Association can make, which might improve the passenger service on our Canadian railways, that member is neglecting his duty if he does not air his views at this meeting. We want this Association to be a useful, as well as a social, organization.

"Newspapers have severely criticised the great Canadian railways for lack of equipment, infrequency of train service, etc., especially in Ontario, and I presume it is the same in certain sections of the west, during the past season. We, being connected with the passenger business of these railways, know what the respective railway companies

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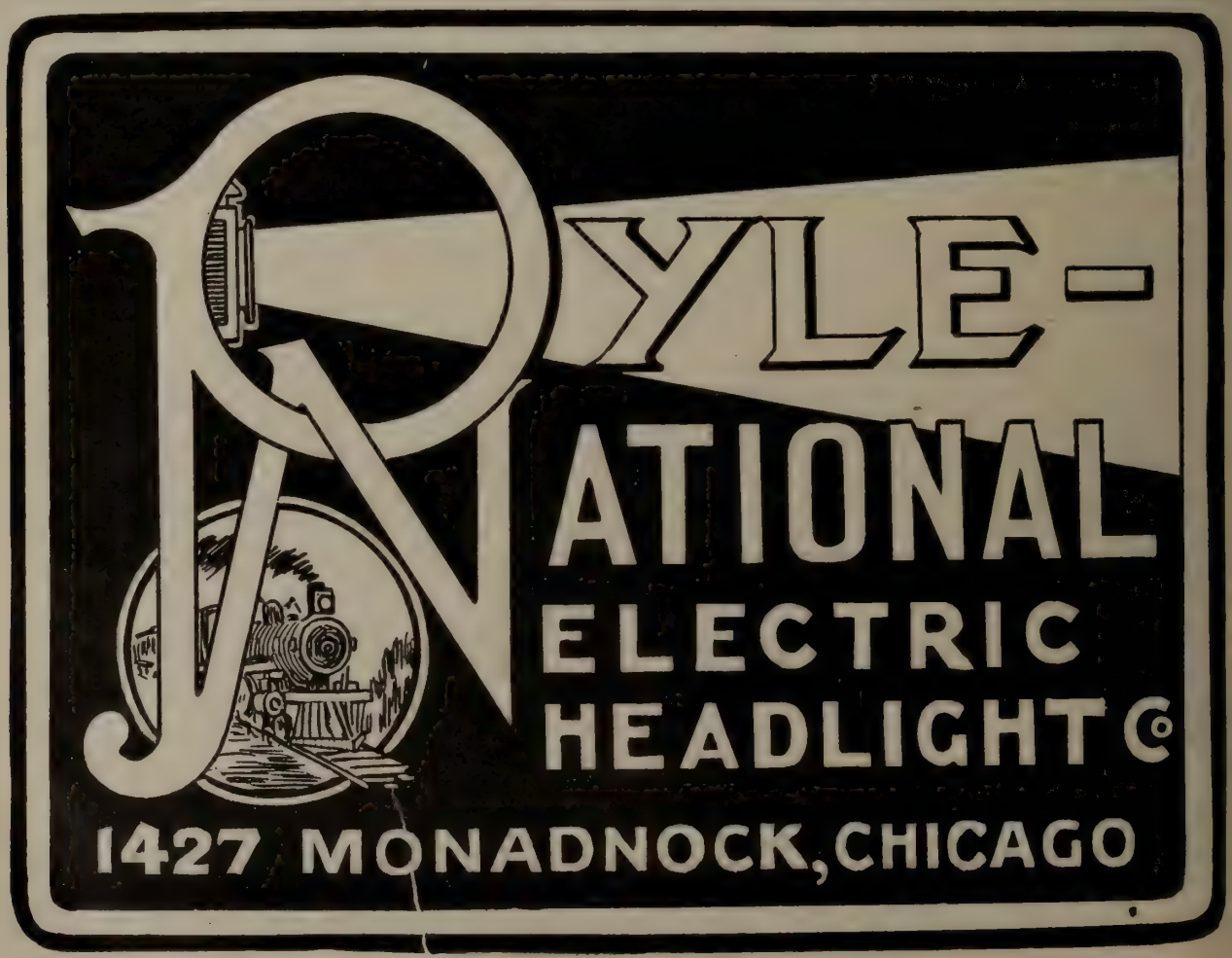

are doing to keep up with the immense increase of passenger traffic in this country during the last two years. We know that they are doing all in their power to provide satisfactory transportation facilities for all sections of the country. A locomotive cannot be built at a moment's notice, neither can a passenger coach. Hundreds of locomotives and passenger cars are on order, both in Canada and the United States, and the inability of the locomotive and car building shops to turn out the motive power and rolling stock on order, is the reason why certain sections of the country have not a more frequent train service. We have it from an authority, that the locomotive and car building establishments both in Canada and the U.S. have orders on hand at the present time which will take them five years to complete. From a national standpoint the C.P.R.'s first duty is to take care of the immense emigration business to this great Canadian Northwest. Consequently most of the new motive power and passenger rolling stock received is placed on the main line to handle that traffic. We know that railways, like all other large corporations, are open to criticism; but let us have fair-minded criticism, giving due consideration to both sides of the subject under discussion.

"Let your observations be keen while here in the west. Intelligent information to a prospective passenger is a great asset to the man behind the ticket counter. I thank you for electing me your President for the year 1907, and trust that you will enjoy the balance of your trip."

A letter from G. T. Bell, General Passenger Agent G.T.R., was read, expressing regret that the Association had decided not to send a representative to the American Association of General Passenger and Ticket Agents' meeting at Washington this year, and pointing out that when the invitation was extended it was expected that each of the co-operating associations would develop some ideas within its own particular field which it would like to have presented to the G. P. A.'s at their annual meeting. This letter evoked considerable discussion. It was explained that the decision not to send a representative this year was largely owing to the expense. The concensus of opinion expressed was in favor of sending a representative in future, and it is probable that the executive committee will so arrange. M. McNamara explained that when representing the C.T.A.A. at the G.P.A. meeting he had urged the payment of commission to ticket agents, but that the G.P.A.'s simply smiled and said nothing. He was not hopeful of its reinstatement.

The question of free transportation for Canadian ticket agents on U.S. railways having been discussed, S. Burrows, M McNamara and S. B. Morris were appointed to draft a resolution on the subject, which they submitted as follows: "That it be an instruction to the representative of this Association at the next annual meeting of the American General Passenger Agents' Association to urge upon that Association the desirability of placing before the U.S. Interstate Commerce Commission, the exceptional position of Canadian ticket agents in respect to the operation of the Interstate Commerce Act, and to ask that members of the Canadian Ticket Agents' Association be exempt from the operation of said law in respect to the granting of free transportation on U.S. roads." This was adopted.

S. B. Morris, in moving that the Secretary-Treasurer's honorarium be the same as in previous years, expressed great regret at Mr. de la Hooke's enforced absence He had known him for between 30 and 40 years, having at one time relieved him as ticket agent on the old Great Western Ry. at London, Ont. The resolution was unanimously adopted.

President McIlroy moved, seconded by W. Bunton, "That whereas the anti-meridian and post-meridian system of notation of time is liable to error and to create confusion particularly with regard to train times, and in public time-bills; and, whereas the 24 hour system of notation of time, in use on the Canadian Government Ry. and the C.P.R. west of Port Arthur, has proved entirely satisfactory on these lines, and is a simple, clear and definite system, and capable of easier notation in public time-bills; therefore, be it resolved, that this Association recommend the adoption of the twenty-four hour system of notation of time by all Canadian transportation companies." After considerable discussion the resolution was carried, only two members voting against it.

Officers for 1908 were elected as follows: President, C. R. Coleman, C.P.R., Truro, N.S.; First Vice-President, R J. Craig, C.P.R., Cobourg, Ont.; Second Vice-President, Lt.-Col. E. C. Piche, C.P.R., Joliette, Que.; Third Vice-President, J. P. Hanley, G.T.R., Kingston, Ont.; Secretary-Treasurer, E. de la Hooke, G.T.R , London, Ont.; Auditor, F. R. Hodgens, G.T.R., Clinton, Ont.; Executive Committee: W. Jackson, C.P.R , Clinton, Ont.; W. McIlroy, C.P.R., Peterboro', Ont.; J. F. Dolan, R. & O.N. Co., Montreal; W. Bunton, G.T.R., Peterboro', Ont.; M. McNamara, G.T.R , Walkerton, Ont.

A special vote of thanks was passed to C B. Foster, District Passenger Agent C.P.R., Toronto, for his great assistance in arranging for the trip. Votes of thanks were also passed to the C.P.R., G.T.R., and other railway companies which had extended courtesies; to the corporations of Winnipeg, Fort William and Port Arthur, to the local reception committee at Winnipeg, and to President McIlroy and the executive committee.

In the afternoon a large number of the party attended a high-class vaudeville performance at the Dominion Theatre, and in the evening most of the ladies went to the Walker Theatre to see the "Heir to the Hoorah." Both the theatre parties were tendered by the local reception committee, who also provided carriages for the guests.

In the evening the members and a number of invited guests attended the annual dinner in the Royal Alexandra's sumptuous dining-room. The dinner, which was beautifully served, was a most enjoyable one, the tables were tastefully decorated and excellent music was provided by an orchestra, in addition to which there was some capital vocal music and several recitations. President McIlroy occupied the chair. The toast list was as follows: The King; The General Passenger Agents, responded to by C. E. McPherson, General Passenger Agent C.P.R. Western Lines, and G. H. Shaw, General Traffic Manager Canadian Northern Ry. Mr. McPherson said that in order to develop a new country he was in favor of paying a commission to ticket agents. Mr. Shaw made the important announcement that within five years the Canadian Northern would have become a transcontinental line, with termini on both the Atlantic and the Pacific. The city of Winnipeg was responded to by acting Mayor Davidson, Alderman Cox, Controllers Cockburn and Garson. "Our Association," by W. Bunton and M. McNamara. "Our Guests," by J. S. Potts and F. W. Drewry. The Travelling Passenger Agents, by B. C. Russel and J. L. Brock. The Press, by Acton Burrows and H. Stead; and The Ladies, by H. L. Brown, G. Lee and A. Philps. The healths of W. Jackson, whose attendance at the meeting was for the 21st year in unbroken succession, and of A. Calder, chairman of the Winnipeg reception committee, evoked great enthusiasm.

On Oct. 15 in the afternoon the party were taken in special cars over the Winnipeg Electric Ry. to the Ogilvie Milling Co.'s mill, Drewry's Redwood factories, old Fort Garry gate and Silver Heights. At night they were entertained by a local committee at a ball at the Royal Alexandra, which was also largely attended by Winnipeggers. The breakfast room was used for dancing, the beautiful drawing-room provided a most charming lounging place and supper was served in the main dining-room. The reception committee consisted of A. L. and Mrs. Preston, Mrs. A. C. Smith, Mrs. G. Walton, Mrs Webster, and H. L. Brown.

The party numbered 109, of whom 36 were ladies. The attendance on previous trips was: 1902, Washington, D.C., 210; 1903, Sydney, N.S., 128; 1904, St. Louis, Mo., 206; 1905, Portland, Me, 121; 1906, Mobile, Ala., considerably over 200.

The following members went on the trip, all being from Ontario, except where otherwise mentioned: G. J. Alexander, G.T.R., Richmond, Que., and wife; A. H. Baird, C.P.R., Paris; A. G. Baker, G.T.R., Leamington, and wife; W. A. Becker, M.C.R., Bismarck; E. R. Blow, C.P.R., Whitby, and wife; W. Bunton, G.T.R., Peterborough; S. Burrows, C.P.R., Belleville, and wife; A. Carscallen, C.P.R., Farnworth; B. Caswell, C.P.R., Smith's Falls; N. Campbell, P.E.I.R., Breadalbane, P.E.I.; R. Clanahan, C.P.R., Glencoe, and wife; C. R. Coleman, C.P.R., Truro, N.S.; R. Cox, C.P.R., Enterprise; R. J. Craig, C.P.R., Cobourg, and wife; F. H. Crosby, C.P.R., Uxbridge, and wife; J. Fox, C.P.R., Lucan, and wife; W. Godfrey, G.T.R., Moorefield, and wife; A. Grant, C.P.R., Perth; A. M. Hare, G.T.R. and Wabash Rd., Tillsonburg; F. M. Hawley, G.T.R., Cobourg; W. Hewson, Richelieu and Ontario Navigation Co., Niagara Falls, and wife; T. Howard, C.P.R., Hastings, and wife; D. Hoy, M.C.R., Fletcher; J. H. Jackson, C.P.R., Georgetown; W. Jackson, C.P.R., Clinton, and wife; J. Kidd, C.P.R., Goderich, and wife; Lieut.-Col. J. Knifton, C.N. Ontario Ry., Parry Sound; G. D. LaCourse, G.T.R., Berlin; F. J. Leaper, Pere Marquette Rd., St. Thomas; N. L. Lusher, London and North-Western Ry. of England, Montreal, Que.; R. Macfarlane, C.P.R., Durham, and wife; A. Malcolmson, C.P.R., Moorefield, and wife; S. Marshall, G.T.R., Dobbinton, and wife; W. Martin, C.P.R., North Bay; T. C. Matchett, C.P.R., Lindsay; W. H. McFarlane, C.P.R., Paisley, and wife; W. McIlroy, C.P.R., Peterborough, and wife; J. McMurchie, C.P.R., Blyth, and wife; P. A. McKeown, B.Q.R., Enterprise; M. McNamara, G.T.R., Walkerton, and wife; R. H. Menzies, C.P.R., Burk's Falls, and wife; S. B. Morris, C.P.R., Rodney, and wife; R. L. Mortimer, G.T.R., Shelburne, and wife; F. C. Muller, M.C. Rd., Springfield; T. B. Nairn, M.C.R., Aylmer; T. J. Nelson, G T.R., Brantford; L. Peine, C.P.R , New Hamburg; A. Philps, G.T.R., Huntingdon, Que., and wife; Lieut.-Col. E. G. Piche, C.P.R., Joliette, Que., and wife, T. B. Pringle, C.P.R., Huntingdon, Que., and wife; J. P. Rhind, I.C.R., Stewiacke, N.S.; J. W. Ridgeway, G.T.R., Brockville, and wife; J. H. Rogers, C.P.R., Moncton. N.B., and wife; A. C. Rorabeck, G.T.R., North Bay; J. H. Sherin, C.P.R., Lakefield, and wife; C. L. D. Sims, Manitoulin and North Shore Steamship Co., Manitowaning, and wife; T. C. Sims, G.T.R., Little Current, and wife; A. M. Smith, G.T.R., Listowel, and wife; D. Smith, C.P.R., Tilbury, and wife; W. L. Smith, C.P.R., Shelburne; S. Stevenson, C.N. Ont. Ry., Hawkesbury, and wife; J. W. Stockvale, C.P.R., Bolton, and wife C. F. Stone, G.T.R., Perth, and wife; Dr. H. A. Turner, C.P.R., Millbrook; E. C. Whitman, I.C.R., Canso, N.S.; E. D. Young, Pere Marquette Rd., Rodney.

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The following invited guests also went on the trip: B. H. Bennett, General Agent, Chicago and Northwestern Ry., Toronto; W. T. Dockrill, Travelling Passenger Agent, C.P.R., Toronto; Dr. Shaw, Honorary Physician of the Association, Clinton, Ont., and wife; A. J. Taylor, Canadian Freight and Passenger Agent, Chicago, Milwaukee and St Paul Ry., Toronto; H. G. Thorley, Passenger Agent for Ontario, International Mercantile Marine Co., Toronto; J. A. Yorick, Canadian Freight and Passenger Agent, Chicago, Burlington and Quincy Rd., Toronto; Acton Burrows, Managing Director THE RAILWAY AND MARINE WORLD, the official organ of the Association.

The special train for the return journey left Winnipeg Oct. 16 at 4 p.m., reaching Toronto Oct. 18 at 10 p.m. Of the original party 35 returned by the special, some of the others returning via St. Paul and Chicago, and a number availing themselves of the Canadian Northern and Canadian Pacific Railways' invitation, and going west to Edmonton, Calgary and British Columbia points.

Perfect arrangements were made for the trip. President McIlroy took charge of the location of the party in the sleeping cars and also the dining-car service. For the first time the Association chartered the dining-cars from the C.P.R Co., and provisioned them through the company's dining-car department. The service was excellent throughout the trip, the menu being a most liberal one, the cooking excellent, and the attendance prompt. Very general satisfaction was expressed, and the improvement over having to get out for meals at uncertain hours was most marked. Secretary-Treasurer de la Hooke had attended to the other details for the trip in his usual systematic and thorough way, so that there was not the slightest hitch. Very great regret was expressed that he was unable to take part in the trip. In his absence, W. Jackson, of Clinton, acted as Secretary, and was most indefatigable in attending to the multifarious duties. He received hearty congratulations on having attended 21 meetings of the Association in yearly succession.

The weather for the trip was most satisfactory. With the exception of Oct. 11 at and west of North Bay, it was very fine, and in Winnipeg it was most perfect, overcoats not being required in the day time there. The train service was excellent, the meals on the dining-cars everything that could be desired, and the heartiness of the reception in Winnipeg will long be remembered by those who were present.

The Winnipeg reception committee comprised: A. Calder, chairman; C. E. E. Ussher, G. H. Shaw, C. E. McPherson, C. W. Cooper, R. L. Daly, G. A. Walton, B. G. Rutley, A. C. Smith, W. C. Dodds, T. Stockdale, W. Stapleton, H. Crossland, H. Corrigan, W. P. F. Cummings, A. E. Duff, W. H. McCallum, W. J. Quinlan, W. J. Wells, H. Swinford, R. McNeillie, W. Cullum, A. L. Preston, A. Brostedt, H. Dunn, D. T. Cummings, J. E. Dougherty, R. Crawford, G. A. Lee, J. Lenfesty, J. I. Gillick, W. M. McLeod, D. Parker, H. L. Brown, R. Bullen, Geo. H. Anthony. The committee did splendid work, and aided by a grant from the City Council provided a most enjoyable programme of entertainment.

H. J. Lambkin, son of J. B. Lambkin, Assistant General Passenger Agent, I.C.R., Halifax, N.S., was in charge of the sleeping cars, and was assiduous in his attention to the comfort of the party.

The following presentations were made n connection with the trip: A. Calder, chairman Winnipeg reception committee, cut glass bowl and silver-mounted flask; H. L. Brown, W. J. Quinlan, A. Brostedt and R. L. Daly, of the Winnipeg reception committee, gold cuff links; C. B. Foster, District Passenger Agent C.P.R., Toronto, cut glass water jug; Mrs. Foster, cut glass vase; W. T. Dockrill, Travelling Passenger Agent, C.P.R., cut glass decanter; Mrs. Dockrill, cut glass bowl.

Manitoba Reminiscences.

From the Manitoba Free Press, Oct. 15.

In replying to the toast of the press, at the Canadian Ticket Agents' Association dinner last night, Acton Burrows, Managing Director of THE RAILWAY AND MARINE WORLD, said: "I think this Association has taken a retrograde step. Two or three years ago the committee having charge of the dinner arrangements decided to omit the perfunctory toasts, such as the Press, and putting them back on the list is hardly in line with the progressive policy of the Association as exemplified in its emphatic resolution of to-day in favor of the 24-hour system of time. I have the opportunity of addressing the members so frequently through the columns of what my good friends Messrs. Shaw and McPherson affectionately call 'the great family journal that no home should be without,' that I am sure the members hear quite enough from me in that way without having to listen to me at the annual dinner, and especially at such a late hour.

"I notice that one of the papers of this marvellous city—and here let me say that no city in Canada has better or more progressive papers than this metropolis of the great west—referred to me as a veteran newspaper man, so perhaps I may be pardoned for becoming reminiscent. It was 28 years ago last spring that I landed in Winnipeg, or rather in that sister city which has been immortalized by Whittier in that beautiful poem, 'The Bells of St. Boniface,' trudged through the soapy, black, argillaceous mould which enabled the venerated Archbishop Taché to say that the country would stick to you even if you did not stick to it—stood on the east bank of the great Red River of the North till Robert Tait's ferry got up steam on the west side, and came across for us, and then trudged again up to the Grand Central hotel, which was then the hotel-de-luxe of Winnipeg. The contrast of that journey from Toronto and the charming trip we made a few days ago over that wonderful pioneer and still the only actual transcontinental railway in America—though there will soon be two more in Canada—landing in a huge train shed, and walking into this luxurious hotel, is certainly a marvellous and a very pleasant one.

"The western papers appear to have been having a little difficulty about the price of their telegraphic dispatches. In those days we were glad to get them at any price. When President Garfield was assassinated, we got a telegraphic bulletin via St. Paul stating the bare facts, and though I stayed at the old Free Press office—where I was then night editor—until after eight in the morning, we did not get another line, and no particulars were available until the St. Paul papers arrived the next day. Frequently we had to print without any dispatches at all, and to head the column usually devoted to telegrams with the words, 'Wires Down,' and occasionally wicked people intimated that it was not the telegraphic service which was at fault, but that the staff had departed from their usual beverage—the sparkling water of that limpid stream which, contrary to the usual practice, insists on running north and losing itself in Hudson Bay, that great sheet of water which in the not distant future will be plowed by a fleet of grain-laden steamships carrying the unrivalled no. 1 hard wheat of these great grain fields to the European markets.

"When I first came here the C.P.R. between Lake Superior and Winnipeg was only partially under construction, and railway building had not been started west of the Red River. It was a great day in Winnipeg when the first locomotive crossed over from St. Boniface on a temporary track built across the river on the ice.

"Many factors have combined in the efforts to develop the great territory tributary to Winnipeg extending west to the Rockies and north and northwest to the Arctic sea. The papers of this territory have done their part well, and irrespective of politics they have displayed a steadfast loyalty to the country and a never wavering faith in its great potential wealth that should never be forgotten.

"I fear I have digressed too much from the topic of the Press, but under the circumstances I hope you will pardon me. It has been a great pleasure to me to take part in the trip. It seems to me like coming home. Sixteen of the happiest years of my life were spent here. I was married here, my children were all born here. I always point to them with pride as being Manitobans and my earnest prayer is that they will never be anything but a credit to the province of their nativity. Fate ruled that I should return east to live, but I have never lost my love for Manitoba, nor has my faith in the future of the great west ever wavered. My deepest regret is that I can hardly hope to be here to see it reach the commanding position in the Dominion confederation which it will undoubtedly occupy within the next quarter of a century."

G.T.R. Subsidiary Companies.

The annual meetings of the shareholders of the various subsidiary companies of the G.T.R. in the United States, were held Oct. 5 and 9, with the exception of the International Bridge Co., the meeting of the shareholders of which was postponed. These companies do not print any annual reports and the proceedings are largely formal. The meetings of the shareholders of the Grand Trunk Junction Ry., and of the Grand Trunk Milwaukee Ferry Co., were held at Chicago, Ill., Oct. 5, the retiring directors were re-elected, with C. M. Hays as President, E. H. Fitzhugh as Vice-President, and G. W. Alexander as Secretary and Treasurer.

The Detroit and Toledo Shore Line Rd. re-elected its directors, the officers being: President, T. P. Shonts; Vice-President, E. H. Fitzhugh; Secretary and Treasurer, G. W. Alexander.

The Grand Rapids Terminal Co. re-elected its directors, the officers being: President, A. B. Atwater; Secretary and Treasurer, G. W. Alexander.

The shareholders of the Grand Trunk Western Ry., Detroit, Grand Haven and Milwaukee Ry., Toledo, Saginaw and Muskegon Ry., Chicago, Detroit and Grand Trunk Junction Rd., Michigan Air Line Ry., and the St. Clair Tunnel Co., met at Detroit, Mich., Oct. 9. All of the old directors were re-elected with the exception of F. H. McGuigan, who was replaced on the boards of the G.T. Western Ry., the Detroit, Grand Haven and Milwaukee Ry., by W. G. Brownlee; and on the board of the Toledo, Saginaw and Muskegon Ry. by A. B. Atwater; while F. E. Ranney, of Greenville, Mich., was elected a director of the Toledo, Saginaw and Muskegon Ry., to fill the vacancy caused by the death of C. J. Church. The officers of these several companies are: President, C. M. Hays; Vice-President, E. H. Fitzhugh; Secretary (of the G.T. Western Ry.; Detroit, Grand Haven and Milwaukee Ry., and Toledo, Saginaw and Muskegon Ry.) G. W. Alexander; Secretary (of the Chicago, Detroit and Canada Grand Trunk Junction Rd.; Michigan Air Line Ry., and St. Clair Tunnel Co.) F. Scott, Montreal.

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LAST TRIP Sept. 10 1907

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Daily except Sunday, - - Levis, 24.10		Daily except Sunday, - St. John, 11.00
	WILL ARRIVE	
Daily except Sunday, - St. John, 17.30		Daily except Monday, - - Levis, 2.50
Daily except Sunday, - Halifax, 20.15		Daily except Monday, - Montreal, 7.30

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TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Safety Car Heating and Lighting Co. has issued pamphlet 683, describing its system of electric lighting for cars by axle-driven dynamos.

A paper on Walschaert Valve Motion was read at the last meeting of the Canadian Railway Club, Montreal, Oct. 1, by C. J. Mellin, Designing Engineer, American Locomotive Co.

The Canadian Iron and Foundry Co.'s new works at West Fort William, Ont., are nearing completion. It is expected that the establishment will be in full working order before the commencement of winter.

The actions recently instituted against the Dominion Car and Foundry Co., Ltd., for an alleged breach of the Alien Labor Act, have been dismissed, the judgment holding that the provisions of the Act do not hold good where a new industry was started in the country where no experienced men could be found.

F. H. Hopkins & Co., Montreal, have issued an up-to-date catalogue of railway and mining contractors' supplies handled by them. It contains descriptions, with illustrations of steam shovels, dump cars, concrete mixers, rock crushers, locomotives, rock drills, hoisting engines, derricks, track supplies, and all other details required for railway and general construction work.

S. F. Bowser & Co., Ltd., Toronto, issues a pamphlet describing its system of oil storage as adopted to the requirements of railway storehouses, terminals, signal towers, etc. The different styles of tanks, pumps and accessories manufactured by the company are illustrated by half-tones, and the particulars given emphasize the safety, economy and cleanliness of the system. The company will supply copies of the bulletin on application

The Canadian Westinghouse Co., Hamilton, Ont., has issued the following circulars: 1092, The Westinghouse Multiple Alternating Arc Lamp; 1102, Westinghouse Direct Current Multiple Arc Lamp; 1128, Small Power Motors for Alternating and Direct Current Circuits; 1143, Regulating and Reversing Controllers for Direct Current Motors in Crane Hoisting and Similar Service; 1144, Westinghouse Mill Motors for Direct Current Service; and a general pamphlet dealing with Electric Machinery for the Operation of Mines.

The McGregor Banwell Fence Co., Ltd., manufacturers of Ideal woven wire fence at Walkerville, Ont., whose factory was destroyed by fire on Mar. 16 last, and who have since been operating in a temporary factory, have almost completed the erection of their new building, which is of reinforced concrete throughout, the floors being reinforced with Ideal fencing specially made for that purpose. The factory will have 24,000 sq. ft. of floor space, the ground floor being used for the storage of wire and for the manufacture of woven wire fencing and the upper story for the manufacture of gates, lawn fencing and fence supplies. Every up-to-date appliance for the manufacture of these goods will be installed and on completion it will be a model factory in this line. The company will also erect a fireproof storage building 200 by 100 ft. It is expected that the looms will be in operation Nov. 15, and in the meantime the trade is being supplied from the surplus stock made up just before the temporary factory was taken down.

Canadian Northern Ry. Construction, Etc.

W. Mackenzie, President, recently completed a trip of inspection over the company's western lines. D. D. Mann, Vice-President, has also been over the lines, and in the course of an interview prior to his visit to Vancouver and Victoria, B.C., he is reported to have said since the beginning of the present year the company had expended over $8,000,000 upon improvements to the line, rolling stock and other equipment. The work of improvement upon the company's various lines was to be proceeded with, and the industries established at Port Arthur were to be developed. The project to construct a line to Hudson Bay had not been lost sight of, although construction was not being proceeded with.

Canadian Northern Ontario Ry.—Work is being rapidly proceeded with on the line between Toronto and Sudbury, Ont. The grading has been completed from Parry Sound to the French River, and track was reported to have been laid to Shell River, 15 miles south of the French River, Sept. 30. The bridge over this river, which is 300 ft. long and 100 ft. above the water level, was completed Oct. 2, and the steel laying gang commenced work laying the track over it Oct. 3. It was expected to have the steel laid to French River by Oct. 31.

Canadian Northern Ry.—D. D. Mann, Vice-President, recently stated at Port Arthur, Ont., that it was the company's intention to carry out considerable improvements upon the main line west. The heavy grade into Stanley is to be evaded; and by means of a cut-off, starting at Slate River, and striking the main line again near Kaministikwia, the line will be shortened by nearly eleven miles between Port Arthur and Winnipeg.

A new station is being built at Beaudette, Minn., to replace the one recently burned. The contract has been let to A. Johnston, Spooner, Wis.

In connection with the erection of the new workshops at Fort Rouge, it is proposed to erect a pumping station 30 by 40 ft., to contain engines capable of pumping 500 gals. of water per minute. Pipe lines are being laid to all the new shops to be connected with the pump station. The water will be obtained from the Red River, and will be available in cases of fire, as well as for the ordinary purposes of the shops

Speaking about the joint station for the C.N.R. and the G.T. Pacific Ry. at Winnipeg, W. Mackenzie, President, said, Sept. 26, that he looked for the commencement of the work of excavation for the foundations about a month thereafter. The plans for the station at the foot of Broadway on the C.N.R. property, bounded by Main St. and the two rivers, are practically decided upon. The main entrance to the station will be on Main St. The plans of the proposed station show the entrances and exits to the station as leading under the tracks, the platforms for trains being reached by staircases and elevators, thus making it unnecessary to cross the many tracks within the station. A bridge over the Assiniboine east of the Main St. bridge will be constructed. Between the tracks of the great railway yard there will be wagon roads which lead to a main road east of the passenger tracks. This road will cross Water St. on the north and Main St. near the Main St. bridge. The driveways will lead towards Water St., the main driveway widening towards Water St. Along the banks of the Red River from the present C.N.R. bridge will be utilized for through traffic and the passenger traffic will be independent of the freight lines. W. Warren and C. D. Wetmore, the architects for the building, spent some days in Winnipeg in consultation with M. H. McLeod, General Manager C.N.R., and O. Winter, Superintendent G. T. Pacific Ry., early in Oct. The contract for the excavation for the foundations of the new building has been let to S. Brown, Winnipeg, and a start made. The work is to be completed by Jan. 1.

The work includes the removal of 45,000 cubic yards of material. The station will have a frontage of 400 ft. on Broadway, and a depth of 230 ft.

A contract was reported to have been signed by the C.N.R. and the G.T. Pacific Ry., Oct. 14.

The company is going on with the construction of the lines into the Goose Lake district, at Disley Hill near Lumsden, and on the Brandon-Regina branch. It is reported in Battleford, Sask., that the company proposes to construct at an early date a line from a point east of Saskatoon into Battleford, Sask., at which point an area of 40 acres has recently been purchased by one of the company's officials.

The bridge building gang arrived at Prince Albert, Sask., Sept. 28, and began preparation for the construction of the substructure of the new railway and traffic bridge across the Saskatchewan River. A track is being laid from the company's yard in Prince Albert to the bridge site. Work will be gone on with on the bridge during the winter.

Westerly from Edmonton, D. D. Mann recently stated there had been graded 40 miles towards the Rocky Mountains, and 25 miles of steel had been laid.

C.N.R. Rolling Stock.—The following statement shows deliveries of locomotives and other rolling stock ordered and delivered to the C.N.R. and subsidiary lines during 1907:

	No. ordered.	Deliv'd to C.N.R.	Deliv'd to east lines.	Yet to deliver.
Locomotives	140	57	24	59
Box cars	1500	1100	300	100
Stock cars	200	167	25	8
Flat cars	150	155	180	..
Refrigerators	20	15	2	3
Composite cars	150	140	60	..
Steel ore cars	50	11	..	39
Cabooses	15	13	7	..
Day coaches	32	7	19	6
S.D. and P. cars	8	6	2	..
B.M. and Ex.	20	12	4	4

The G.T.R. freight sheds at Toronto Junction, Ont., were destroyed by fire Oct. 18, the value of the buildings being placed at about $4,000.

W. G. McLean, at one time in the Great Northern Ry. (U.S.A.) service in Toronto and Montreal, died in Chicago, Ill., Oct. 25, and was buried at Sarnia, Ont.

F. B. Polson, President and General Manager Polson Iron Works, Ltd., Toronto, died Oct 28, suddenly. He had suffered somewhat from acute indigestion and had been slightly unwell for a couple of days, but no serious result was expected. He was born at Port Hope, Ont., Feb. 10, 1858, his father, W. Polson, being Mechanical Superintendent of the Grand Trunk Junction Ry. at Belleville. F. B. Polson studied engineering and was in the service of the Cobourg and Peterboro' Ry. and Mining Co., and of the Peterboro' Ry. and Mining Co., subsequently being Mechanical Superintendent of the Victoria Ry., at Lindsay, resigning in 1883 to join his father in founding the Polson Iron Works. The firm built, at Owen Sound, the S.S. Manitoba for the C.P.R., the first steel vessel constructed in Canada, and has developed into the present company, which does a large business in ship, dredge and boiler building, etc. Mr. Polson was a member of the Toronto Technical School Board, and an Associate of the Canadian Society of Civil Engineers. He was at one time chairman of the Employers' Association arbitration board, and took part in several arbitrations, notably one between the Toronto Ry. Co. and its employes.

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C. P. R. Betterments, Construction, Etc.

Northern Colonization Ry.—Contract has been let to the Orillia Construction Co., for the grading, etc., upon an extension from Nominingue, Que., towards Maniwaki, Que., for a distance of 10 miles, and work is in progress. Surveys are in progress upon the remaining 35 miles of the extension, and we are advised that it is expected to let a contract for the work shortly.

Hull Improvements.—In connection with the improvements which the C.P.R. is carrying out at Hull, Que., it is reported locally that a project for the construction of a second track under the C.P.R. property via Little Farm, is under consideration.

Kingston and Pembroke Ry.—Traffic was suspended for some days recently at Wilbur station, about 30 miles south of Renfrew, Ont., by the sinking of about 125 ft. of track in a bog.

The Campbellford, Lake Ontario and Western Ry. will apply next session of the Dominion Parliament for an act extending the time for the commencement and completion of its projected railway.

In a letter addressed to the Mayor of Oshawa, Sir T. G. Shaughnessy, President C.P.R., said: "We have not lost sight of the proposed line through Oshawa to Toronto, but the Sudbury extension and the Guelph and Goderich Ry. have not only cost a great deal more money than we anticipated, but the time occupied in their construction has exceeded the estimate by a year or more. Present conditions of the money market do not encourage much railway construction, but I trust that another year there will be improvement. Meantime I have not changed my views as to the desirability of the connection with which you are specially interested."

Lindsay, Bobcaygeon and Pontypool Ry.—Application will be made next session of the Dominion Parliament for an act extending the time within which it may construct the extension of its railway branches which it has been authorized to construct. The notice is signed by C. Swabey, Toronto, Secretary.

South Ontario Pacific Ry.—The Dominion Parliament will be asked next session to pass an act extending the time within which it may construct the railways and bridge authorized.

West Ontario Pacific Ry.—An extension of time for the construction of this railway will be applied for at the next session of the Dominion Parliament.

Guelph and Goderich Ry.—The extension of the branch, now under construction from Linwood to Listowel, Ont., as far as Stratford, is under consideration. P. A. Peterson, Chief Engineer, is quoted as stating that the work upon this branch would engage his attention in the future; while no definite decision had been reached with respect to the extension from Listowel to Stratford, the work might be commenced early in 1908.

The plans prepared for the station at Listowel show a building 77 by 30 ft., of red pressed brick, on stone foundations, with a slate roof. A new station at Guelph will be constructed in the spring.

St. Marys and Western Ry.—In connection with the construction of this line between Embro and St. Marys, local reports state that it is proposed to start a branch from near Harrington and run it to Stratford, effecting a junction there with the projected extension of the Linwood-Listowel branch of the Guelph and Goderich Ry.

Owen Sound to Meaford.—On a recent visit to Owen Sound, J. W. Leonard, Assistant General Manager Eastern Lines, discussed with merchants and others the possibilities of line from Owen Sound to Meaford, Ont. A local report states that a proposal is under consideration for the construction of such a line, with an extension via Beeton to the company's Toronto-Sudbury line, and to the new Georgian Bay-Seaboard Ry.

Toronto-Sudbury Line.—In connection with the development of traffic on this line the company is taking out curves and gradients between Weston and Bolton, Ont., on its Toronto-Owen Sound line. A new right-of-way is being acquired at several points, and there will be a considerable amount of heavy work, particularly at Woodbridge.

The erection of stations and freight sheds on the section of the line north of French River has been completed, and the contractors—Woolrich and Leslie—have transferred their plant to the Muskoka section, where they are engaged in putting up various buildings.

Improvements at Port Arthur.—Nothing definite has been decided as to the improvements which it is proposed to undertake at Port Arthur, Ont. The plans which are being considered form part of the general plan for improvements at the company's terminals at the head of the Great Lakes. What is being aimed at is to provide facilities to fill the company's requirements for many years to come.

St. Boniface Station.—Work was commenced at the end of Sept. upon the new station at St. Boniface, Man. The new building will be a two story one, and is to be completed by the end of the year.

Teulon to Icelandic River.—A contract has been entered into between the Dominion Government and the C.P.R. for the construction under subsidy of a railway from a point at or near Teulon to a point on the Icelandic River, Man., 35 miles, upon the usual terms. This subsidy is in lieu of that granted by chap. 57 of the statutes of 1903, which was for a railway from Winnipeg Beach or Teulon to a point on the Icelandic River by way of Gimli, not exceeding 35 miles.

Manitoba and Northwestern Ry.—The Dominion Parliament will be asked next session for authority to construct a branch line from Theodore, 25 miles from Yorkton, Sask., southeasterly to connect with the Russell branch in tp. 20 or 21, range 28, west of the principal meridian.

Mowbray, Man.—The C.P.R. has a branch line extending from Glendale to Mowbray, Man., near the International boundary. A report from Langdon, N.D., states that C.P.R. officials have been making investigations there as to the possibility of extending the line a few hundred yards from Mowbray across the International boundary. The object of the extension, the reports state, is to secure the shipment of grain in bond. Under the Canadian law wheat hauled across the boundary in wagons cannot be shipped in bond, but if cars are loaded and sealed south of the line it can be done. Langdon is a station on a branch of the Great Northern Ry., U.S., extending from Grand Forks to Hannah, N.D.

Regina-Bulyea Line.—We are advised that a contract has been let to J. Bradley for the construction of a line from Regina northerly to Bulyea, Sask., 43.2 miles. Bulyea is a station on the company's Pheasant Hills branch, now completed to Lanigan, where a junction is effected with the Manitoba and Northwestern Ry.'s line, which runs into Saskatoon, Sask.

Killam to Strathcona.—Application will be made next session of the Dominion Parliament for an act authorizing the construction of a branch line from Killam, or some point in tp. 44, ranges 13 and 14, west of the 4th principal meridian, northwesterly to Strathcona, Alta.

Weyburn to Lethbridge.—We are advised that consideration has been given to the proposal to construct a line from Weyburn, Sask., to Lethbridge, Alta., but no definite decision has been reached in regard to it.

MacLeod Roundhouse.—Orders have been received for the addition of twelve stalls at the roundhouse at MacLeod, Alta.

Hector-Field Grade Reduction.—The contract for this work has been let to the McDonell and Gzowski Co., Vancouver, B.C., as reported.

British Columbia Southern Ry.—Application will be made next session of the Dominion Parliament for an act extending the time for the commencement and completion of the railway authorized from Fort Steele to Golden, B.C., which it is duly authorized to construct.

Grand Forks, B.C.—Press reports state that it is proposed to commence the construction of a roundhouse, repair shops and other buildings at Grand Forks, B.C., at a cost of $100,000, early in 1908.

Nicola, Kamloops and Similkameen Ry.—A survey party in charge of H. Carry, C.E., is going over the route surveyed last year from Nicola up Quilchena Creek to Aspen Grove, B.C. The party will also go through the Douglas Lake country with a view of ascertaining whether a satisfactory route can be obtained for an extension of the line with the Midway-Vernon line.

Esquimalt and Nanaimo Ry.—An act will be applied for next session of the Dominion Parliament extending the time within which it may commence and complete the railway and branches as follows: An extension of the main line to Comox, B.C., from Comox to a point near Campbell River; from near Duncans to Alberni, via Cowichan Valley; from near Englishman's River to the Alberni River; from near Comox, via Cumberland, southwesterly to the Alberni Canal.

H. E. Beasley, assistant to R. Marpole, General Executive Assistant, is engaged in securing the right-of-way for the extension of the line from Wellington to Nanoose. It is expected that the work of clearing the right-of-way will be started at an early date.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—The Wisconsin Railroad Commission has issued a certificate permitting the company to construct an extension from the Wisconsin-Minnesota State boundary through Douglas county to South Superior, to connect with the proposed line of the Wisconsin and Northern Minnesota Rd.

The American Association of General Passenger and Ticket Agents has decided that its convention in Sept., 1908, be held in Toronto.

The aggregate value of Canadian securities listed on the London, Eng., stock exchange, is $1,181,000,000, of which $867,000,000 represents steam railway shares and bonds, and $46,000,000 shares and bonds of street railway, light and power companies.

The Permanent Construction Society of Quebec will apply next session of the Quebec Legislature for an act giving the Society more extensive powers to carry on financial operations than it possesses at present. C. N. Hamel, Quebec, is solicitor for the Society.

The Quebec Transportation Club's annual trip took place recently. The party left Quebec, Oct. 14, visiting Portland, Boston, Philadelphia, Atlantic City and Washington, and returned Oct. 27.

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Ashcroft, Barkerville and Fort George Ry.—Application will be made next session of the Dominion Parliament for an act extending the time for the commencement of the company's projected railway in British Columbia. Eberts and Taylor, Vancouver, are solicitors for the applicant. (Aug., 1906, pg. 449.)

Boundary, Kamloops and Cariboo Ry.—Application will be made next session of the Dominion Parliament for an act extending the time for the construction of this projected railway. Pringle and Guthrie, Ottawa, are solicitors for the company.

British Yukon Ry.—Application will be made next session of the Dominion Parliament for an act authorizing the company to construct a line from its present railway at or near White Horse in the Yukon territory, northwesterly to a point on the Tahkeena River. Power is also asked to issue bonds upon the line of railway so constructed. The Yukon Council at a special session has under consideration the proposal of the company to construct 12 miles of line through the White Horse copper fields.

We are advised that the B.Y. Ry. contemplates the construction of a track to leave the company's present main line some five or six miles south of White Horse, Yukon Territory, and to proceed in a generally northwesterly direction to tap all the copper properties in the district of White Horse. The development of these properties has now reached such a stage as to warrant serious consideration of the construction of this track. The surveys, we are informed, have not yet been completed. (See White Pass and Yukon Ry. Oct., pg. 743.)

Burk's Falls and French River Ry.—Following are the officers and directors for the current year: President, R. J. Watson, Burk's Falls, Ont.; Vice-President, V. Ratz, Parkhill, Ont.; Secretary-Treasurer, H. W. Cooper, Montreal; Solicitor, D. R. McLean, Burk's Falls; other directors: A. A. Agar. Burk's Falls; R. Cook, South River, Ont,

The company was organized in June last, the act of incorporation having been passed by the Dominion Parliament in 1906. The company is authorized to construct a railway from Burk's Falls to a point at or near where the C.P.R. crosses the French River. H. W. Cooper, the Secretary-Treasurer of the company, is in the G.T.R. offices at Montreal. (Aug., 1906, pg. 451.)

Calgary and Fernie Ry.—The Dominion Parliament will be asked next session for an act extending the time for the commencement and completion of construction. Pringle and Guthrie, Ottawa, are solicitors for the applicant. (Aug., 1906, pg. 451.)

Crow's Nest Southern Ry.—The line now under construction from Fernie to Michel, B.C., is an extension of the C.N.S. Ry., and the route to be followed is along the Elk River valley and the Michel creek. The Elk River will be crossed at four points. A. Guthrie & Co., Fernie, are the contractors, and —. Taylor, is engineer in charge.

Debert Ry.—A regular freight service is being operated over this short line, extending from the Intercolonial Ry. to the Debert coal fields.

Detroit River Tunnel.—The first section of the tunnel was placed in position in the Detroit River at Windsor, Ont., Oct. 1. The first section is 260 ft. long, and contains two steel tubes each 23 ft. 4 in. in diameter. The tubes, supported in timber caissons, were sunk in a trench dredged in the bottom of the river, and the caissons are to be filled with concrete. After the concrete has been placed the water will be pumped out of the tubes, a moderate air pressure put on, and the work of putting in a reinforced concrete lining 20 inches thick begun from the inside. The tubes are built of boiler plate, strongly braced, and have a temporary bulkhead on each end which will be removed when the work of lining is commenced. There will be ten sections of similar size sunk in the river to form the tunnel.

Duluth, Rainy Lake and Winnipeg Ry.—This line has its southern terminus at Virginia, Minn., with which town the Duluth, Missinabie and Northern Ry., Great Northern Ry., and the Duluth and Iron Range Ry. connect. The D.R.L. and W. Ry. runs in a northwesterly direction to Ranier, Minn., which place is located where Rainy Lake empties into Rainy River, and is about 2½ miles east of International Falls on the U.S. side, and Fort Frances on the Canadian side. A railway bridge across Rainy River is now under construction and the Canadian Northern Ry. is constructing about 1½ miles of track to connect the Canadian end of the bridge with its line. By this means trains will be able to be run through between Duluth and Winnipeg and Duluth and Port Arthur over the two lines by an arrangement with one of the existing lines terminating in Virginia. The D. R. L. and W. Ry. has completed surveys for an independent line from Virginia to Duluth, about 63 miles, where connection will be made with all roads entering that city. The country between Virginia and Ranier is heavily timbered, and it is estimated that the lumbering business will provide plenty of traffic for the line for the next twenty-five years. There is a lot of good agricultural land along the line, which is being rapidly taken up; in fact, there is but little land left within five miles of the line. The settlement will also bring a good deal of traffic, as will also the traffic moving to and from the Canadian border. The track has been laid to Ranier, but we are advised that about 16 miles of ballasting is required, and some other work has to be done. This it is expected to have completed by Dec. 1. (Sept., pg. 663.)

Fort William Bridge and Terminal Ry.—The question of the location of the projected terminal station and railway in Fort William, Ont., was before the Board of Railway Commissioners at Fort William, Sept. 27. The C.P.R. protested against the allowing of level crossings, while the city contended they should be 1,000 ft. from the shore.

Great Northern Ry. (U.S.) in Canada.—Nothing is being done at Winnipeg, Man., in connection with the project to construct extensive terminals in that city. The property which was purchased by the company is being repaired and the tenants of the Ross Ave. property have not been given notice to leave. It is not expected, therefore, that anything will be done in the matter until early in 1908.

A contract has been let to R. N. Willoughby for the erection of freight sheds at Brandon, Man., at a cost of about $12,000. The sheds are to be located between Thirteenth and Fifteenth Streets. Work is already in progress.

Halifax and Northeastern Ry.—W. A. Harper, an English engineer, has been looking over the route of this projected railway between Halifax and Sunny Brae, Country Harbor, via the Musquodoboit River Valley. The Provincial Government last session voted a guarantee of bonds for the construction of this railway, but the company in which Sir H. M. Allan is interested has declined to take up the matter, and it is reported that an English syndicate is now looking into the project.

Hudson's Bay Pacific Ry.—Col. May, who represents this company which proposes to construct a railway from Hudson Bay to Port Simpson, is visiting Victoria, B.C., in connection with the project. He states that a contract has been let for the construction of a wharf and a hotel on Work channel, to the north of the Tsimpsean peninsula. Somers and Musgrove are the contractors.

A. W. Johnson, of Toronto, who is associated with Colonel May in the promotion of this railway, said at Vancouver, Oct., that application for a charter would be made next session of the Dominion Parliament. The capital stock will be $100,000,000, and the proposed road will be 1,700 miles in length. It will run northwest from Port Simpson, B.C., traverse the Omineca River valley, descend the Peace River to Lake Athabasca, and then run in an almost direct line to Fort Churchill on Hudson Bay. The company has secured land for terminals on Work channel near Port Simpson, and is now negotiating with the Provincial Government for an additional area of 3,000 acres. In connection with the railway a line of steamers to run between Fort Churchill and British ports is projected.

Interprovincial Bridge—Quebec-New Brunswick.—The proposal to construct a railway and general traffic bridge across the Restigouche River from Campbellton, N.B., to the Quebec side, is again being considered. T. Malcolm, who is the general contractor for the International Ry. of New Brunswick, says that the arrangements for construction have been completed. The bridge will be 3,300 ft. in length, and will cost about $600,000.

Kamloops and Yellowhead Pass Ry.—Application will be made next session of the Dominion Parliament for an act extending the time within which the company may construct its projected railway. Tupper and Griffin, Vancouver, are solicitors for the applicants. (Aug., 1906, pg. 453.)

London and Port Stanley Ry.—The new steel bridge over the Thames south of London, erected by the Pere Marquette Rd., lessees of the line, was opened for traffic Oct. 8.

Minnesota and International Ry.—The last rails have been laid on the extension of this line from Little Falls to International Falls, opposite Fort Frances, Ont. E. W. Backus, of Minneapolis, Minn., President of the company which is developing the power plant at International Falls, drove the last spike. The line has been completed by stages, first to Bemidji, then to Black Duck, Northolme, Big Falls, and now the section of 33 miles to the International Falls. G. M. Huss is chief engineer in charge of construction. The train service is being operated by the Northern Pacific Ry. (Sept., pg. 663.)

New Brunswick Coal and Ry. Co.—The Commissioners appointed by the New Brunswick Government to manage the N.B.C. and Ry. Co.'s line, which includes the old Central Ry. of New Brunswick, invited a party of the members of the Dominion Parliament, the Provincial Legislature and others, to inspect the line Oct. 8. The trip was arranged with a view of showing what had been done on the line since the Commission took it over, and to make an examination of the collieries of the Grand Lake district, which provide the principal traffic for the line.

New Brunswick Southern Ry.—Application will be made next session of the Dominion Parliament for an act declaring it

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to be a work for the general advantage of Canada, and for authority to construct a bridge across the St. Croix River at or near Milltown or St. Stephen, N.B. The erection of such a bridge would enable connection to be made with the Washington County Ry. Weldon and McLean, St. John, N.B., are solicitors for the company.

Niagara-Grand Island Bridge Co.—Application will be made next session of the Dominion Parliament for an act extending the time for the commencement and completion of the company's projected undertaking. This is one of the Michigan Central Rd. projects in Canada.

North-West Pacific Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title, with power to construct a railway from Fort Churchill on Hudson Bay, southwesterly to the Beaver River, thence to Peace River Pass by way of Lac la Biche and Lesser Slave Lake, thence by way of Hazleton to some harbor on the Pacific Coast. Power is also sought to construct the following branch lines: From Lac la Biche to Edmonton, Alta.; from Lac la Biche to Fort McMurray, and from Green Lake to Prince Albert, Sask. Murphy and Fisher, Ottawa, are solicitors for the applicants. (See Port Simpson and Eastern Ry., May, pg. 327.)

Owen Sound and Meaford Ry.—The proposal to connect these places by rail is again being revived by the Owen Sound Board of Trade. There is a special charter owned by local interests who are desirous that the line be constructed either by the G.T.R. or the C.P.R., and there is also a proposal that the two places be connected by a line to be constructed by the Huron and Ontario Ry., an electric railway company.

Port Simpson to Peace River.—The British Columbia Legislature will be asked next session to pass an act incorporating a company to construct a line or lines of railway from Port Simpson by the most feasible route to a point on the eastern boundary of the province. The projected route is along the southwest side of Work channel to the Skeena River, the north side of this river to Hazleton, and to the junction of the Bulkley River, up the right bank of this river for eight miles to Suskewa River; on to the head of Babine Lake, Stuart Lake, McLeod Lake, Misnichinca River and Summit Lake to Pine River pass, along Pine River to Moberley Lake and thence by Peace River to the eastern boundary of the province. Power is also asked to construct branch lines and for other incidental purposes. J. P. Walls, Victoria, B.C., is solicitor for the applicants.

Quebec and Lake St. John Ry.—D. B. Hanna, President, and Z. A. Lash, K.C., one of the directors, completed a trip of inspection over the La Tuque branch, Sept. 30. The Government Inspector went over the branch subsequently, and it was expected that a regular train service would be placed in operation by the end of Oct. The branch leaves the main line at a point from Quebec and extends to the La Tuque Falls of the St. Maurice River.

Saskatoon, Saskatchewan, Peace River and Dawson Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title for the purpose of constructing a line of railway from Saskatoon northerly, crossing the Canadian Northern Ry. near Langham, Sask., and crossing the North Saskatchewan River in tp. 40, range 7, west of the third meridian, thence northerly to near Redberry Lake, then northwesterly passing near Frog Lake to the crossing of the Athabasca River near Athabasca Landing, Alta.; thence northwesterly to the crossing of the Peace River near Peace River Landing, thence northwesterly by the most direct and feasible route to the crossing of the Dease River, B.C., about 15 miles westerly from its outlet into the Liard River, thence to the Nisutlin River in the Yukon Territory, and on to Dawson City by way of the Big and Little Salmon Rivers, Stewart River, Flat Creek and Klondike River. It is also desired to carry on a general navigation business on any of the rivers and lakes reached by the railway, to develop water powers and to utilize the same for the operation of its railway, or for sale. Smith and Britton, Toronto, are solicitors for the applicants.

Tanana Valley Ry.—This railway extends from Chena and Fairbanks on the Tanana River to the mouth of Cleary Creek on the Chatamka River, a distance of 40 miles. Fairbanks and Chena are connected by rail, and the main line to the end of the line at Chatamka extends from the junction half way between Fairbanks and Chena. The railway was constructed for the purpose of supplying transportation to the miners operating on the different creeks in the vicinity. At present the company has four locomotives, four passenger coaches and 25 freight cars, and is operating two trains a day each way to the end of the creeks, and two trains a day between Chena and Fairbanks. It is intended to extend the lines wherever it is possible to serve the miners with transportation, and in opening up the interior of Alaska. All the material, rolling stock, equipment and supplies have to be brought to Fairbanks by steamer from the mouth of the Yukon River, or via Skagway and Dawson, Yukon Territory, consequently railway building is very expensive. The officers of the company are: President and Manager, F. Joslin; Superintendent, C. Moriarty; Traffic Manager, J. H. Rogers; Auditor, R. W. Taylor; Storekeeper, A. P. Tyson. Office, Fairbanks, Alaska.

Temiskaming and Northern Ontario Ry.—Work on the extension northwards of this line is being delayed owing to the non-arrival of the steel for the bridges. The principal of these bridges is at Watzberg, Wabie, and Driftwood. Some difficulty is being experienced at mileage 1.51, or 37 miles north of New Liskeard, Ont., owing to the sinking of a portion of the line in a ravine This ravine had been filled in, and the rails have sunk twice, on the first occasion 10 ft., and on the second 15 ft. The extension of the line to a port on Hudson Bay is being generally urged upon the Ontario Government, which is building the line.

Vancouver, Victoria and Eastern Ry.—The line between Oroville, Wash., northwest to Keremeos, B.C., 38 miles, is reported to have been completed and a train service has been placed in operation. A contract is reported to have been let to J. H. Stewart, Grand Forks, B.C., for the construction of the line from Keremeos to Hedley, B.C., 40 miles

Western Canada Ry.—It is proposed to apply next session of the Dominion Parliament for an act incorporating a company with this title to construct the following lines of railway, and to operate the same by steam, electricity or other motive power: From the International boundary between range 23 and 28, west 4th principal meridian, to the C.P.R. Crow's Nest Pass Line, between Pincher Creek and Cowley, and by the Old Man River, Livingstone Mountains and the Livingstone and High River to Calgary; and from near Livingstone River to the valley of the Elk River, and thence to a junction with the C.P.R. Crow's Nest Pass Line and the Crow's Nest Southern Ry., near Michel. It is also desired to have authority to make traffic arrangements with other companies, including any line of railway in the state of Montana. Hough, Campbell and Ferguson, Winnipeg, Man., are solicitors for the applicants. (See Great West Ry., Oct., pg. 741.)

White Pass and Yukon Ry.—See British Yukon Ry.

Winnipeg City Power Line.—Tenders have been asked for 500 tons of relaying rails, to be delivered before the close of navigation, and for 1,500 tons to be delivered by Feb. 1. A report to the Board of Control shows that over a mile of track has already been laid.

G.T.R. Betterments, Construction, Etc.

Kingston, Smith's Falls and Ottawa Ry.—Surveys are reported completed in the vicinity of Smith's Falls, Ont., for this projected railway. The party is now working in the vicinity of Richmond.

Port Hope Subway.—Considerable progress has been made with the construction of the subway under the G.T.R., on the Lake Shore road, Port Hope, Ont. The work is being done by the company, W. Pengelley being in charge.

Tracklaying.—Two gangs are reported to be at work relaying the track between Acton and Stratford, Ont., with heavier rails. The work is being gone on with from each end and the two gangs are expected to join ends at Guelph.

London Improvements.—C. M. Hays, Second Vice-President and General Manager; E. H. Fitzhugh, Third Vice-President; W. G. Brownlee, Transportation Manager; U. E. Gillen, Superintendent; and W. Loud, Freight Traffic Manager, were in London, Ont., Oct. 10. Speaking of the question of the raising of the tracks and other work in the city, Mr. Hays said he could not say anything in regard to re-opening negotiations with the city of London. The company had completed a great work in eliminating the grade west of the city, and the results were proving most satisfactory. It is likely that the attention of the officials would be taken up with the east for some time now, as a number of changes were contemplated there. Subsequently Superintendent Gillen stated that as soon as the new coal chutes east of Adelaide St. were completed the old ones would be moved half a mile further east. It was then proposed to straighten the line, and as soon as possible the dangerous double crossing at Egerton St. will be replaced with two tracks only. The work of straightening the line to Pottersburg was not pressing, and would probably not be commenced until 1908. The present yards at the east end were to be enlarged, and other improvements made.

London Car Shops.—The additional buildings to be constructed in connection with the shops at London, Ont., are: freight car erecting shop, 536 ft long by 50 ft. wide; and wheel shop 80 ft. by 66 ft. 1½ in. The foundations will be of cement, and the sidewalks of brick, covered with trussed roofs of slate fitted with skylights. The freight car shop is to have two tracks running the full length of the shop for erection purposes, holding 30 cars; service tracks will be provided with the necessary turntables connecting the present shops, store, etc. The wheel shop will be equipped with the usual lathes, presses, etc., for the handling and finishing of car wheels. Both shops will be provided with fire protection, water service, drainage, electric lighting, and all the conveniences of the most modern car plant.

St. Clair Tunnel Electrification.—The installation of the plant for the haulage of trains by electrical power through the tunnel has been completed. The official inauguration of the plant took place recently.

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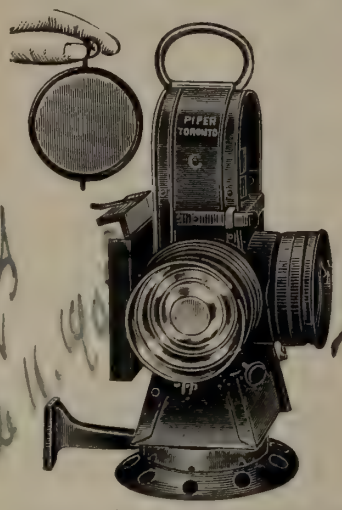

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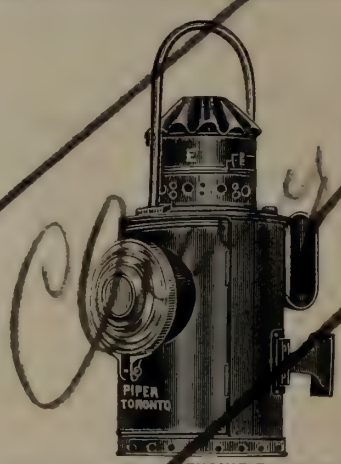

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Falls Hollow Staybolt Co., Cuyahoga Falls, O.	860
Farlow Draft Gear Co., Baltimore, Md.	828
Firth, Thos., & Sons, Sheffield, Eng.	852
Flannery Bolt Co., Pittsburg, Pa.	844
Foster, James, Toronto	Cover 1
Fullerton Lumber & Shingle Co., Vancouver, B.C.	835
Galena Signal Oil Co., Franklin, Pa.	794
Gardner, J. T., Chicago	864
Gartshore, J. J., Toronto	866
Gartshore-Thomson Pipe & Foundry Co., Ltd.	862
Golden-Anderson Valve Spec'y Co., Pittsburg, Pa.	840
Gold Car Heating & Lighting Co., New York.	828
Goold, Shapley & Muir Co., Ltd., Brantford, Ont	850
Government of Manitoba	870
Grand Trunk Railway	832
Greening, The B., Wire Co., Ltd., Hamilton, Ont.	860
Hamilton Steel & Iron Co, Hamilton, Ont.	814
Hayes Track Appliance Co., Geneva, N.Y.	836
Holden, N. J. Co., Montreal	—
Hopkins, F. H., & Co., Montreal	802
Hotel Imperial, New York City	836
Hotel Walton, Philadelphia, Pa.	804
Hudson's Bay Company	826
Hunt, Robert W., & Co., Montreal	856
Hunter-Rose Co., Ltd., Toronto	870
Hutton, James, & Co., Montreal	868
Illinois Central Railroad	868
Imperial Bank of Canada	860
Independent Pneumatic Tool Co., Chicago, Ill.	806
Intercolonial Railway	824
International Correspondence Schools, Chicago	806
International Mercantile Marine Co.	856
Jessop, Wm., & Sons Ltd., Sheffield, Eng.	866
Kelson, The W. H., Co., Montreal	868
Kennedy, Wm., & Sons (Ltd.), Owen Sound, Ont.	858
Kerr Engine Co. Ltd., Walkerville, Ont.	854
Latrobe Steel & Coupler Co., Philadelphia, Pa.	868
Lewis, Rice & Sons, Toronto	842
Leonard, E. & Sons, London, Ont.	870
Locomotive and Machine Co. of Montreal, Ltd.	796
Mail Job Printing Co., Ltd., Toronto	866
Males, The, Co., New York City	870
McCaskill, Dougall & Co., Montreal	Cover 1
McClintock Mfg. Co., St. Paul, Minn.	832
McConway & Torley Co., Pittsburgh, Pa.	808
McCord & Co., Chicago, Ill.	814
McGregor-Banwell Fence Co., Ltd., Walkerville.	848
McDougall John, Caledonian Iron W'ks Co., Ltd.	858
McKenzie, The M. Co., Ltd., Montreal	870
Mechanical Mfg. Co., Chicago, Ill.	868
Metcalf, John S., Co., Chicago, Ill.	866
Midland Towing & Wrecking Co., Ltd., Midland, Ont	870
Modoc Soap Co., Philadelphia, Pa.	870
Montreal Steel Works, Ltd., Montreal	824
Mussens Limited, Montreal	Cover 1 and 800
National Malleable Castings Co., Cleveland, O.	Cover 1
New Hotel Brevoort, Chicago, Ill.	834
Norton, A. O., Coaticook, Que.	804
O'Connor, J. J., Port Arthur, Ont.	870
Ontario Wind Engine and Pump Co., Toronto.	858
Orford Copper Co., New York	844
Owen Sound Wire Fence Co., Ltd., Owen Sound.	868
Page Wire Fence Co., Ltd., Walkerville, Ont.	822
Pere Marquette Rd.	870
Peter Smith Heater Co., Detroit, Mich.	840
Phillips, Eugene F., Electrical Works, Ltd.	862
Piper, The Hiram L., Co., Ltd., Montreal	870
Piper, N. L., Railway Supply Co., Ltd., Toronto.	832
Polson Iron Works, Ltd., Toronto.	812
Porter, H. K., Co., Pittsburgh, Pa.	808
Positive Lock Washer Co., Newark, N.J.	864
Prowse, G. R., Montreal	862
Pyke, J. W., & Co., Montreal	828
Pyle National Electric Headlight Co., Chicago.	820
Rail Joint Co., of Canada, Ltd., Montreal	Cover 2
Rhodes, Curry & Co., Ltd., Amherst, N.S.	816
Robb Engineering Co., Ltd., Amherst, N.S.	816
St. Thomas Brass Co., Ltd., St. Thomas, Ont.	842
Safety Car Heating & Lighting Co., New York.	848
Sheriffs Mfg. Co., Milwaukee, Wis.	864
Simplex Railway Appliance Co., Ltd.	Cover 4
Smart, James, Mfg. Co., Ltd., Brockville, Ont.	846
Soule Raw Hide Lined Dust Guard Co.	842
Standard Car Truck Co., Chicago, Ill.	834
Standard Coupler Co., New York City.	858
Standard Explosives, Limited, Montreal.	830
Standard Inspection Bureau, Ltd., Toronto.	864
Standard Steel Works, Philadelphia, Pa.	822
Steel Concrete Co., Ltd., Montreal	824
Stevens, F. B., Detroit, Mich.	838
Submarine Signal Co., Boston, Mass.	850
Taylor, Homer, Montreal	854
Toronto Bolt and Forging Co., Ltd., Toronto.	850
Toronto Pressed Steel Co., Ltd., Toronto	848
United Typewriter Co., Ltd., Toronto.	858
Valentine & Sons Publishing Co., Montreal	—
Vulcan Iron Works Co., Toledo, Ohio.	860
Vulcan Iron Works, Wilkes-Barre, Pa.	846
Washburn Steel Castings & Coupler Co., The.	852
Wire & Cable Co., Montreal	830
Wolfe Brush Co., Pittsburg, Pa.	856
Wood, G. S., Chicago, Ill.	854
Woodman, R., Mfg. and Supply Co., Boston, Mass.	858

The ratepayers of Lachine, Que., voted in favor of granting a bonus of $50,000, and exemption from taxes and water rates for 20 years, to a proposed locomotive company. It is intended to erect a plant at a cost of about $3,000,000, employing 500 men at the close of the first year, 1,000 the second year, and 1,500 the third year.

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TRANSPORTATION APPOINTMENTS.

Canadian Northern Ry.—A. Brunton, heretofore Trainmaster at Dauphin, Man., is now engaged as conductor in the passenger service between Winnipeg and Prince Albert, Sask.

W. A. Brown, who until recently was General Superintendent, Winnipeg, Man., has been appointed Superintendent, Fourth District, with headquarters at Edmonton, Alta., succeeding C. Carey, resigned.

Canadian Pacific Ry.—T. Collins, heretofore acting Trainmaster Guelph and Goderich Ry., has been transferred to the Eastern Division.

J. K. McNeillie, heretofore of the Car Service Department, Montreal, has been appointed Assistant Superintendent of the Toronto Terminals, succeeding F. G. Martyn, transferred to London, Ont. All communications respecting matters in the Toronto Terminals should be addressed direct to Mr. McNeillie, whose office will be in the Toronto Union Station.

F. G. Martyn, heretofore Acting Superintendent Toronto Terminals, has been appointed Assistant Superintendent, district no. 2, Ontario Division, with office at London, Ont. He will have special jurisdiction over train service.

A. J. Forrest has been appointed Assistant Storekeeper at Winnipeg, vice W. H. Hesketh, deceased.

Delaware and Hudson Rd.—W. H. Williams, heretofore assistant to the President, has been elected Third Vice-President in charge of the Treasury and Accounting Departments.

W. D. Schofield has been appointed Assistant to the President, succeeding W. H. Williams.

Duluth, Rainy Lake and Winnipeg Ry.—M. A. Murphy, heretofore Superintendent, is reported to have been appointed General Manager. Office, Virginia, Minn.

Erie Rd.—T. J. English, heretofore Superintendent at Youngstown, Ohio, has been appointed assistant to the General Manager.

T. Rumney, heretofore Mechanical Superintendent, has been appointed General Mechanical Superintendent, succeeding E A. Williams, who resigned some months ago.

Grand Trunk Pacific Ry.—A. A. Tisdale, heretofore Assistant to the General Transportation Manager G.T.R., Montreal, has been appointed Assistant to the Vice-President and General Manager, G.T.P. Ry. Office, Montreal.

R. Watchborn, heretofore a U.S. Immigration Commissioner at Montreal, is reported to have been appointed Purchasing, Fuel and Labor Agent G.T.P. Ry. at Montreal.

Grand Trunk Ry.—M. S. Blaiklock, heretofore Superintendent Eastern Division, has been appointed Engineer of Maintenance of Way, with office at Montreal. Superintendents will hereafter address to Mr. Blaiklock all reports and communications heretofore forwarded to the office of the General Transportation Manager in matters pertaining to maintenance of way.

H. E. Whittenberger, heretofore Superintendent Kansas City Southern Rd., Pittsburg, Kan., has been appointed Superintendent, Eastern Division, G.T.R., succeeding M. S. Blaiklock, promoted.

D. Crombie, heretofore Master of Transportation at London, Ont., has been appointed Assistant to the General Transportation Manager, succeeding A. A. Tisdale, transferred to the G.T. Pacific Ry.

G. Beckingham, heretofore acting General Roadmaster, Eastern Division, has been placed in charge of the double-track work between St. Lambert and Ste. Rosalie, Que.

J. C. Crombie, heretofore Chief Dispatcher at London, Ont., has been appointed Master of Transportation there, succeeding D. Crombie, promoted.

C. Forster, heretofore Night Chief Dispatcher at London, Ont., has been appointed Chief Dispatcher there, succeeding J. C. Crombie, appointed Master of Transportation.

Walter White has been appointed Night Chief Dispatcher at London, Ont., succeeding C. Forster, promoted.

G. Martyn, heretofore accountant for the G.T.R. and Wabash Rd. at St. Thomas, Ont., has been appointed Auditor of Expenditures at Montreal.

The following agents were appointed during Sept.: Barrington, Que., C. McGinnis; Ste. Annes, Que., J. H. Hebert; Anson Junction, Ont., L. Pearce; Markham, Ont., W. J. Smith; Stouffville, Ont., W. T. Byam; Sundridge, Ont., J. R. Hunter (Acting); Canfield Junction, Ont., W. Hockin: Burgessville, Ont., W. Norman; Whitechurch, Ont., W. H. Lyons; St. Polycarpe Jct., Que., W. Hardy; Whitney, Ont., J. W. Berlanquet; Edgington, Ont., E. H. Gallagher. Outside Ticket Agent, Smith's Falls, Ont., J. J. Gardiner.

Great Northern Ry. (U.S.)—F. E. Ward, General Manager, is reported is have resigned.

Lackawanna-Grand Trunk Line.—W. Craigie has been appointed Acting Manager, W. P. Fitzsimons, Manager, having resigned on his appointment as Manager of the Bureau of Transportation and Manufactures, Detroit, Mich., Board of Commerce. Office 1003 Ellsworth Building, 355 Dearborn St., Chicago, Ill.

Michigan Central Rd.—J. F. Farrell has been appointed Purchasing Agent, succeeding S. B. Wight, appointed to a similar position on the N.Y. Central and Hudson River Rd.

M. B. Snow, Superintendent of the Chicago Division, has been appointed Assistant General Superintendent at Detroit, succeeding J. H. Snyder, transferred to Chicago as Superintendent.

W. H Flynn has been appointed Division Master Mechanic at St. Thomas, Ont., in charge of the Mechanical Department of the Canada Southern Division, succeeding G. J. Duffey, resigned.

Minnesota and International Rd.—The officers of this line are: President, H. Elliott. St. Paul, Minn.; Vice-President, J. N. Hill, New York City; General Manager, W. H, Gemmell, Brainerd, Minn.; Secretary, W. F. Brooks, Minneapolis, Minn.; Assistant Secretary, R. H. Relf, St. Paul; Treasurer, C. A. Clark, St. Paul; Auditor, M. W. Downie, St. Paul; Superintendent, W. H. Strachan, Brainerd.

New York Central and Hudson River Rd.—Reports state that A. H. Smith, Vice-President and General Manager in charge of operating, has had his jurisdiction extended over the Boston and Albany Rd.

S. B. Wight, heretofore Purchasing Agent Michigan Central Rd., has been appointed Purchasing Agent N.Y.C. and H.R. Rd., succeeding D. Fairchild, resigned.

J. H. Heustis, heretofore General Superintendent Western District, Syracuse, N.Y., has been appointed Assistant General Manager Boston and Albany Rd. Office, Boston, Mass.

L. H. Van Allen, heretofore Superintendent Buffalo Terminals, has been appointed General Superintendent Western District, at Syracuse, succeeding J. H. Heustis.

J. P. Bradfield, heretofore Assistant General Manager, has been transferred from New York to Buffalo, subject to duties assigned by the Vice-President and General Manager.

T. W. Evans, Assistant Division Superintendent at Jersey Shore, Pa., has been appointed Superintendent of the Rochester division, with headquarters at Rochester, N.Y., in place of S. R. Payne, who has been transferred to the superintendency of the Buffalo division, with office at Buffalo, N.Y., succeeding L. H. Van Allen.

Pennsylvania Rd.—W. H. H. Willis, heretofore acting Canadian Freight Agent, Toronto, has been appointed Canadian Freight Agent there, succeeding E. D. Mackenzie who was granted three months' leave of absence in Aug. Prior to coming to Toronto, Mr. Willis was Special Agent of the Traffic Department at Pittsburg, Pa.

Tanana Valley Rd.—J. H. Rogers, heretofore Traffic Manager White Pass and Yukon Route, has been appointed Traffic Manager T. V. Rd. Office, Fairbanks, Alaska.

The C.P.R. has contributed $5,000 to the Anti-Tuberculosis Fund being raised in Vancouver, B.C.

J. D. McArthur Co., Ltd, railway contractors, has been registered at Regina, Sask., under the Northwest Territories Ordinance respecting foreign companies.

We are advised that while the C.P.R. has not, as yet, altogether abandoned the use of acetylene gas for car lighting purposes, it has been decided to substitute Pintsch gas in its stead.

The Continental Cobalt Mines Co., Ltd., of the United States, has been licensed under the act respecting extra-provincial companies to carry on its business in the Province of Ontario, and amongst other things to acquire and operate private railways, private tramways, and telegraph and telephone lines. A. G. Slaght, Haileybury, Ont., is its attorney.

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Railway Finance, Meetings, etc.

Baie des Chaleurs Ry.—The Exchequer Court has ordered the sale upon a date and conditions to be hereafter settled, of the B. de C. Ry., upon the application of the Royal Trust Co., of Montreal, as representatives of Gallindez Bros., bankers, London, Eng., creditors to the amount of £217,400. This railway has had a very chequered financial history, and this decision will enable the tangle to be cleared up.

Boston and Maine Rd.—At the annual meeting held Oct. 9, the shareholders approved of an issue of $6,000,000 of bonds for the purpose of taking up the floating debt of the company. The B. and M Rd. owns over 50% of the capital stock of the Maine Central Rd., which has a line from Portland, Me., through the Crawford Notch of the White Mountains, to a connection with the Quebec Central Ry., just south of Lime Ridge, Que. The Hereford Ry. from the International boundary to Dudswell, 48.50 miles, and the Dominion Lime Co.'s line from Dudswell to the lime quarries, 4.80 miles. The M.C. Rd. also owns the Somerset Ry., extending from Oakland to Moosehead Lake, Me.; and through ownership of the Portland and Rumford Falls Rd., it has acquired control of the Indian River Ry., a company organized to construct a line from the Maine-Quebec boundary line to Megantic, Que., on the Quebec Central Ry., and C.P.R. The B. and M. Road operates under lease the Massiwippi Valley Ry., extending from the International boundary to Lennoxville, Que., 31.95 miles, with a branch from Stanstead Jct. to Stanstead, Que., 3.51 miles. Total, 35.46 miles. The Washington County Rd., which is also owned by the same interests, owns the Princeton branch at St. Croix, N.B., 5.10 miles in length.

Buffalo and Lake Huron Ry.—The report of the directors for the half-year ended June 30 sets forth that after providing for the interest on the first and second mortgage bonds, the available balance, including the amount brought forward from the Dec. half-year, was £14,536, 6s. 6d., enabling the directors to pay the usual dividend of 5s. 3d. per share, and leaving a balance of £751, 13s. 3d. to be carried forward, as against £705, 11s. 4d. The line is leased to the G.T.R. at £70,000 a year. The outstanding securities are: 52,513 ordinary shares, £525,130; first mortgage 5½% bonds, £297,600; second mortgage 5½% bonds, £466,158.

Canada Atlantic Ry.—The meeting of shareholders called for Sept. 24, for the purpose of passing a resolution amalgamating the company with the G.T.R., was adjourned to Oct. 24.

Cape Breton Coal, Iron and Ry. Co.—A meeting of holders of 5% gold bonds was called to be held in London, Eng., Oct., for the purpose of passing resolutions authorizing the issue of $2,000,000 of 6% first mortgage bonds, and redeemable in 30 years at a premium of not exceeding 7%; the conversion of the 5% gold bonds into income bonds; and renouncing and releasing the claims of such 5% gold bonds until the first mortgage gold bonds shall have been retired.

Cincinnati, Hamilton and Dayton Rd.—At the meeting of the shareholders held in Cincinnati, Oct. 8, a resolution was passed ratifying the several agreements which have been worked out in the settlement of the troubles of the company growing out of the merger with the Pere Marquette Rd., and other lines. The resolutions included the repudiation of the agreement with the Pere Marquette Rd., which again becomes an independent line.

The Pere Marquette Rd. owns the Lake Erie and Detroit River Ry. in Canada, and operates the London and Port Stanley Ry. under a lease.

Columbia and Western Ry.—F. A. Heinze has given notice of appeal against the decision of Justice Clement, directing a partition of the 600,000 acre land grant in B.C., belonging to the C. and W. Ry., which the C.P.R. bought under an agreement. Heinze claims that under the agreement the partition is not to take place until 1912

Cuba Ry.—At the annual meeting held recently in New York, the report of the directors showed that the railroad owned and operated 426 miles of road, whose gross earnings for the year amounted to $1,953,309, with operating expenses of $1,294,955, leaving net profits of $658,354. After deducting $325,930 for interest on bonds, this left the company with a net income of $332,424 for the year, and a general surplus of $698,031. It is expected that within a short time the road will be on a dividend paying basis. Sir W. Van Horne is President.

Great Northern Ry., U.S.—At the annual meeting held in New York, Oct. 9, the following were elected directors for the ensuing three years: H. W. Cannon, W. B. Dean, and S. Thorne.

Intercolonial Ry.—The earnings of the Intercolonial Ry. for Aug. were reported to be $886,000, the largest on record for any one month in the history of the line.

Lake Superior Corporation.—The report for the year ended June 30, contains the following figures:

	1907	1906
Interest on investment securities	$527,982	$1,102,044
Miscellaneous net income	150,029	36 700
Total income	$678 011	$1,138.744
Coupons outstanding 1st mortgage bonds	500,000	452,200
Interest accrued 1st mortgage bonds	.....	37,683
Balance	$178,011	$648,861
General expenses, taxes, etc.	148,381	91,981
Surplus	$29,630	$556.880

Balance brought forward on June 30, 1906, was $591,683, which, added to surplus for the year, makes a total surplus of $621,313, less 5% paid on income bonds Oct., 1906, $150,000, the balance of undivided surplus on June 30, 1907, was $471,313. In addition to interest and dividends paid as stated, the subsidiary companies have reserved $342,000 from net earnings for the year to increase their working capital.

The Ontario Government has granted a six months' extension of the guarantee on the $1,000,000 loan now outstanding. The guarantee was originally on a loan of $2,000,000, and relief was given in respect of one-half of this in April.

The annual meeting of shareholders will be held Nov. 6.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—The shareholders authorized the issue of $14,000,000 of additional common stock and $7,000,000 of preferred stock, by resolution passed at the annual meeting recently held. Of this it is proposed to issue to shareholders of record, Sept. 27, $1,400,000 of preferred and $2,800,000 of common stock at par in the proportion of one share of preferred and two shares of common stock for each five shares now held by preference shareholders, and a half share of preferred and two shares of common stock for each five shares of common stock held.

Phillipsburg Ry. and Quarry Co.—A meeting of shareholders was held at Montreal, Oct. 24, for the purpose of ratifying a resolution passed by the directors selling the quarries, mills and all other of the company's assets, except the railway and railway rolling stock to the Missisquoi Marble Co.

Temiskaming and Northern Ontario Ry.—The gross receipts for the six months ended June 30, amounted to $402,629 and the working expenses to $284,796, against $250,042 earnings and $143,734 working expenses for the same period, 1906. Adding to the net earnings of $117,853, the amount of $14,692 received from mining royalties, the surplus for the half-year amounts to $132,525.

In the action brought by the Larose Mining Co. against the T. and N.O. Ry. Commission, the Court of Appeal has decided that the Commission had power to sell to the Right of Way Mining Co. the right to mine on the railway right-of-way.

Toronto, Hamilton and Buffalo Ry.—Approximate earnings for Sept., $71,521.58, against $69,157.83 (actual) for Sept. 1906

Michigan Central Railroad Fined.

In the case against the Michigan Central Rd., on a charge of criminal negligence in the explosion of a car of dynamite at Essex, Ont., Aug. 9, to which the company pleaded guilty, a fine of $25,000 was inflicted. In delivering judgment, Oct. 25, Justice Riddell said: "In my view, it is not too much to require of a railway company, if it persists in carrying explosives, to do so only in cars made for the express purpose, in a train on which no other freight or passengers are carried and accompanied by a person who understands how to deal with such explosives, if by any chance there should be a leaking or should other trouble ensue. The sentence of the court is that the Michigan Central Railroad Company do pay, as and for a fine for the indictable offence of which they have admitted their guilt, and for the use of our Sovereign Lord the King, the sum of $25,000, upon the second count (omitting to perform their duty by taking reasonable precautions). If this sum be paid to the sheriff of Essex within 30 days from this date, the Attorney-General will be requested to direct that nofurther proceedings be taken. If not, I shall deliver judgment upon the first count at the opening of the next Sandwich Assizes, to which time this court will stand adjourned after the delivery of this judgment."

The Intercolonial-G.T.R. Arbitration.

The Board of Arbitrators to which was referred a number of matters in dispute between the G.T.R. and the Intercolonial Ry., has announced its decision respecting the question of the entrance into Montreal of the Intercolonial Ry. over the G.T.R. In 1898 the Dominion Government purchased the Drummond County Ry. as an extension of the Intercolonial Ry., and entered into an agreement with the G.T.R. by which an entrance into Montreal was secured over that company's line from Ste. Rosalie Junction, Que. It has been claimed from the outset that the terms and conditions of the contract were not being fulfilled by the G.T.R., and that traffic on the G.T.R. west of Montreal, destined for points on the Intercolonial Ry., or reached by the latter's connections, were being forwarded elsewhere than via Montreal. The award of A. C. Killam, chairman; G. F. Shepley, Government arbitrator, and Justice Davidson, G.T.R. arbitrator, maintains the views advanced by the Intercolonial Ry. as to the meaning of the agreement. It has been decided that in entering into arrangements with any carriers, other than the Intercolonial, covering the traffic in question, the G.T.R. committed breaches of agreement. A general accounting has therefore been ordered on all branches of the Intercolonial's claim to ascertain the damages that have been suffered by reason of the G.T.R. breaches of contract from the date of its execution to the present time.

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REMOVAL OF OFFICES.

About the middle of November the offices of this paper will be removed from 33 Melinda Street, Toronto, where they have been located for a number of years, to 157 Bay Street, where we have leased suite 701, Continental Life Building, which comprises spacious, well-lit and thoroughly up-to-date offices in every way suited to the requirements of our rapidly expanding business, which has outgrown its present quarters.

After Nov. 8 correspondence for THE RAILWAY AND MARINE WORLD should be addressed to 157 Bay Street, Toronto, instead of to 33 Melinda Street as heretofore.

National Transcontinental Railway.

A despatch sent out from Ottawa states that in 1903, when the project for the construction of this railway was introduced, the cost of the eastern section, extending from Moncton to Winnipeg, 1,800 miles, was estimated at $100,000,000. It is now estimated that the cost will be at least 25% in excess of this amount owing to the increased cost of labor, materials and supplies of all kinds. It is stated that this increased cost of construction, and the inaccessibility of the section of the country through which the line will pass between Abitibi and the junction with the Lake Superior Branch, is responsible for the delay in putting this portion of the line under contract. Another despatch from Ottawa states that on the 660 miles of the Eastern Division of the line under contract there are over 18,000 men at work, and that the monthly pay roll is over $1,000,000.

Justice McLeod of the New Brunswick High Court has decided that the N.T. Ry. is a Government railway, and that the provisions of the Railway Act requiring a deposit to be put up before taking possession of land did not apply, and that all the Commission had to do was to file with the Registrar of Deeds a plan of the lands required for railway purposes. This decision was given upon an application of the Commission for an order putting it in possession of lands required for the railway in Madawaska county.

An immediate start is to be made upon the grading of the 50 mile section from Moncton westerly to Chipman, N.B., the contract for which was let to the G.T. Pacific Ry. The company has sublet the work to J. H. Corbett, of Franklyn, Pa., who will have his headquarters at Chipman.

We are advised that the contract which the J. W. McManus Co. is carrying out on the National Transcontinental Ry. is for an eight mile section from a point about 1½ miles east of Chipman, N.B., westerly, mileage 50 to 58. The contract is direct with the Commissioners of the Transcontinental Ry., and not a sub-contract under the G.T. Pacific Ry., as previously reported.

The G.T. Pacific Ry., which secured the contract for the section of 150 miles easterly from the Abitibi River, has sublet the work to the J. H. Reynolds Construction Co. This company proposes to get in supplies, form camps, and perfect arrangements for starting grading work in the spring.

J. W. Fitzgerald, Ontario Land Surveyor, who has returned to Peterborough, Ont., after a summer spent in making surveys in the Matagami district, is reported as saying that the principal feature of the construction of the line in northwestern Ontario will be a tangent of 70 miles, on which there is no obstruction whatever except rivers.

GRAND TRUNK PACIFIC RY.

C. M. Hays, President G. T. Pacific Ry.; F. W. Morse, Vice-President and General Manager, accompanied by A. Smithers, of London, Eng., Vice-President G.T.R., Senator Cox, and others interested in the construction of the line, spent a month in inspecting the work in progress. They visited Prince Rupert, the Pacific Coast terminal point, and on returning to Vancouver, Sept. 30, Mr. Hays said the company would construct a line from Fort George to Vancouver, but for the present attention would be confined to the construction of the main line. The growth of Prince Rupert since his visit a year ago had surprised him. On returning to Montreal, Oct. 14, he said he expected that his next visit to Edmonton would be made over the G.T. Pacific Ry. from Fort William. While the company had the right to construct branch lines the company's first care would be to complete the main line through to the coast. As regards steamships the company would operate two fleets of steamers, one on the Atlantic and one on the Pacific. It was too early to discuss details, but he might say that the company would work in connection with allied lines of steamships, especially the Allan Line, but if necessary, it would construct its own fleet.

It was reported Oct. 8, that about 40 miles of track had been laid on the Lake Superior Branch from Fort William, Ont., and that construction trains were running daily. A drawbridge is to be constructed across the Kaministikwia River at Fort William, the contracts for which have been let to Wylie & Balfour for the substructure, and to the Canadian Bridge Co. for the steel work. The bridge will accommodate not only the railway tracks, but an electric railway, vehicles and foot passengers.

An inspection of the line from Portage la Prairie, mileage 54, to Rea, mileage 176, was made by H. A. K. Drury, Inspecting Engineer for the Board of Railway Commissioners, Winnipeg, and an order was issued Oct. 3, authorizing the operation of freight trains over this mileage. The stations are as follows: Portage la Prairie, mileage 54; Arona, mileage 59; Barr, mileage 63; Caye, mileage 70; Deer, mileage 76; Exira, mileage 84; Firdale, mileage 91; Gregg, mileage 99; Harte, mileage 106; Ingelow, mileage 112; Justice, mileage 121; Knox, mileage 129; Levine, mileage 136; Rivers, mileage 142; Myra, mileage, 151; Norman, mileage 158; Oakner, 158; Pope, mileage 164; Quix, mileage 170; Rea, mileage 176. The line crosses at grade the C.P.R. near Red Deer and Justice, and the Canadian Northern Ry. near Gregg.

Steel has been laid to the Assiniboine River, 150 miles west of Portage la Prairie, and is being pushed forward as rapidly as possible. A second gang has started working eastward from Saskatoon, Sask. The grading is almost completed between Portage la Prairie and Saskatoon, some few small gaps being reported remaining Sept. 30. It is expected that this portion of the line will be completed and in operation by the end of the year.

Westerly from Saskatoon, Sask., to Edmonton, Alta., the contractors are pushing the work as rapidly as possible. C. Schrieber, Consulting Engineer of the Department of Railways, left Ottawa Sept. 28, for the purpose of inspecting the work done and in progress as far as Edmonton.

The Canadian White Co. has started work on a contract for a fill of 200,000 cubic yards, at the western end of the bridge over the Saskatchewan River at the Clover Bar crossing. The piers and abutments for this bridge are being put up by the May-Sharpe Construction Co. The work done by the firm during the summer includes the erection of a concrete pier 95 ft. above low water mark, with a double row of piers on one side of the river and the anchor pier.

The question of letting a contract for 200 miles from Edmonton, westerly towards the Yellowhead Pass, is under consideration, and it is expected tenders will be called for shortly.

In connection with the construction of the line from Kitamaat easterly, J. W. Stewart, of the firm of Foley Bros, Larson & Co., the contractors, says that active work is in progress on the 10 mile section from Kitamaat summit to Kitselas canyon, where the Copper River joins the Skeena River. The rock work there is the heaviest on the entire 180 miles between Kitamaat Arm and Hazleton. The right-of-way from Kitamaat to the Kitselas canyon, 45 miles, is being cleared, and a wagon road is being constructed. When this section has been completed it will be possible to go ahead rapidly with the construction of the upper section of the line to Hazleton. Progress will be slow at first owing to the limited transportation afforded by the river. Reports from Kitamaat state that there is every probability that a port will be established there for handling G.T. Pacific Ry. business before the development of Prince Rupert is proceeded with.

A map showing the complete transcontinental system is issued as a supplement to this number of THE RAILWAY AND MARINE WORLD.

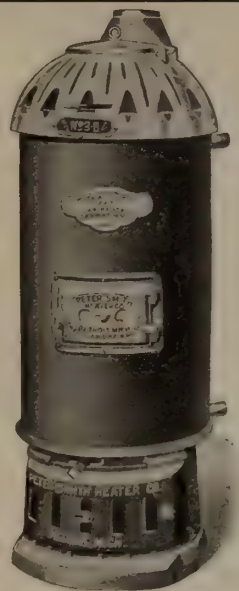
Montreal Street Railway Company.

Following is a comparative statement of earnings, expenses, etc., for the years ended Sept. 30, 1906 and 1907:

	1907						1906	
Gross earnings	$3,503,643.43						$3,100,486.88	
Operating expenses	2,104,653.42						1,850,719.97	
Net earnings	$1,398,990.01						$1,349,786.91	
To which add:								
Received from M.P. & I. Ry. on account of interest	55,104.44							
Total net revenue	$1,454,091.45						$1,249,766.91	
From which deduct:								
City percentage on earnings		$214,840.36			$178,408.38			
Interest on bonds and loans		195,833.64			163,599.68			
Contingent account for renewals		171,517.04			179,055.79			
Rental of leased lines		3,059.64						
			585,250.68			521,063.85		
Surplus	$ 868,840.77						$ 728,703.06	
From this there have been paid four quarterly dividends of 2½% each		$768,100.00			$700,000.00			
Placed to credit of fire insurance fund		25,000.00			25,000.00			
			793,100.00			725,000.00		
Transferred to surplus account			$75,740.77			$3,703.06		

The Board of Railway Commissioners has approved of C.P.R. standard mileage tariff at the rate of 3 cents a mile for its line between Strassburg and Govan, Sask.; Govan and Nakomis, Sask.; and Teulon and Komarno, Man.

Sir C. Rivers Wilson, President G.T.R., who headed a deputation to the President of the British Board of Trade, in favor of the establishment of a ferry scheme across the Dover Straits to France, said Oct. 25, that there were 78 of such ferries in America, that the G.T.R. ferries on Lake Michigan worked exceedingly well, and an accident, even on a passage of 85 miles, under the severest conditions of fog, had not occurred.



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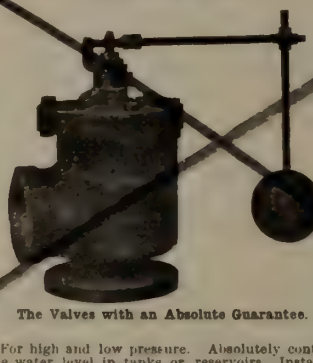

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British Columbia Electric Ry.—Hon. Maurice Gifford London, Eng., a director of the company, accompanied by R. H. Sperling, General Manager, and F. R. Glover, Assistant General Manager, made a tour of inspection over the company's lines recently, paying particular attention to the New Westminster-Chilliwack route, construction of which has been commenced. He said that the company was thoroughly in earnest in the matter, and had full confidence in the future of the route. The work would be pushed on and he had no doubt the construction work would be completed within the time stipulated. A deviation of the originally proposed line, so as to include Fort Langley on the route, has been suggested.

Preparations are being made by the company for taking over the line constructed by the C.P.R. between Eburne and New Westminster.

The extension of the Powell St. line in Vancouver to Hastings is under consideration, but nothing has, as yet, been decided upon.

Calgary St. Ry.—Tenders are under consideration by the city public works committee, for the construction of about 13 miles of street track with overhead trolley work, and for six semi-convertible cars, with electrical equipment. In connection with this construction a steel bridge is to be built, with concrete abutments, over the Elbow River.

Edmonton St. Ry.—A press report states that with the object of placing the street railways of Edmonton and Strathcona, Alta., under one management, the Edmonton Commissioners will apply for a Strathcona franchise. A further report states that a proposal to purchase and operate the line already completed in Edmonton has been made by P. Cronin, of Toronto, on behalf of an English firm, and it is probable that it will be favorably entertained.

Grand Valley Ry.—The Brantford City Council has received an application for the right to extend the lines along several streets in the city, and to lay double tracks in some of them. It is proposed to practically double the mileage in the city. The company agrees to pave the streets in which it desires to lay tracks to the entire width. The company proposes making considerable extensions and improvements on this line and the others recently absorbed. The old road between Brantford and Galt is to be reconstructed, and new 80-lb. rails laid, and the distance decreased by the elimination of curves where possible. The extension to St. George, via Blue Lake, is to be pushed to completion; and it is intended to commence work on the Port Dover extension, via Simcoe, a distance of 34 miles, including switches. On the road to Woodstock, where the old Woodstock and Ingersoll line will be re-constructed, work is to be started, and eventually the line extended to London. When these projects are carried out, the company will operate about 142 miles of track. It is intended to carry freight over the lines, and switches will be established in connection with factories where desired. On cars constructed for freight purposes, each will be supplied with four 75 h.p. motors. (Oct., pg. 759).

Hamilton Radial Ry.—Application is to be made at the forthcoming session of Parliament to amend the company's charter by providing for an extension of its line of railway from Mimico to some point within the limits of Toronto, and for authority to purchase, lease or amalgamate with the Brantford and Hamilton Electric Ry., the Hamilton, Grimsby and Beamsville Electric Ry., and any other electric railway running into Hamilton; and to construct a line from Brantford through the counties of Brant, Oxford, Elgin, Kent, and Essex, to Detroit River, at or near Windsor; or to enter into an agreement, or agreements, with the Windsor, Chatham and London Ry., and the Windsor, Essex and Lake Shore Rapid Ry., or either of them, for any of the purposes specified in sec. 361 of the Railway Act; and to build and operate ferry steamers across the Detroit River, to construct an international bridge over the Niagara River, or to enter into a contract for the use of any bridge, already or hereafter constructed, over the Niagara River; also to extend the time for the completion of the construction of its various branches, and for power to construct branches in different directions in Wentworth county, and for power to interchange traffic and freight, and freight cars, with all steam and other railways crossed by or crossing, or connecting with its railway, and to be declared a railway for the general advantage of Canada. The Toronto Board of Control has instructed the City Solicitor to oppose the application, as far as the proposed entrance to the city is concerned, unless before coming in the company secures the consent of the city.

Hamilton, Waterloo and Guelph Ry.—Surveys of the various routes proposed by this company are being made, and it is anticipated that the work of construction will be commenced early in 1908. (Oct., pg. 759).

Kenora-Keewatin Electric Ry.—A company has been formed to promote an electric railway from Kenora to Keewatin, and thence along the Winnipeg River, connecting up with the G.T. Pacific Ry. We are advised that the line may be constructed either by the town of Kenora or the company, and that it is hoped to commence the work in the spring.

London St. Ry.—The city council at its recent meeting decided to arrange a meeting with the directors of the company to consider the extension of the lines in various parts of the city.

Montreal St. Ry.—A statement of the terms and conditions on which the M.S. Ry. is prepared to take up the freight carrying business over its lines, was submitted to the city council Oct. 18. The company agrees to lay lines and pave and keep in repair the streets utilized for the space occupied by its tracks and eighteen inches on each side. The city is to be relieved of all claims for damages arising from the construction of the tracks; and freight depots are to be erected in different parts of the city. In return for the privilege the company agrees to water the streets occupied by its tracks, the water to be supplied by the city, and to pay a percentage upon its gross earnings from the carriage of freight, from 4% on all receipts up to $200,000, to 15% on all receipts in excess of $1,500,000. The company desires power to run freight cars 24 hours a day, but agrees that its operations will not be allowed to interfere with the operations of the passenger service.

Montreal and Southern Counties Ry.—At a special meeting of the committee appointed to consider the application for power to enter the city, it was decided to report to the city council, recommending that the application be granted. The company claimed that it already had power to use Mill St., and now desired permission to run along Grey Nun and Wellington streets, and connect with Youville St. For this privilege it will pay the city on a basis of $1,600 a mile, pave the streets and remove snow. (Oct., pg. 761).

Mount McKay and Kakabeka Falls Ry.—Grading and tracklaying operations have been commenced on this line, which will run from Kakabeka Falls to Fort William, and connect with Port Arthur.

Nipissing Central Electric Ry.—A survey of the proposed route of this line along the Haileybury road has been completed, and a report submitted. (Oct., pg. 759).

Puget Sound International Ry. and Power Co.—This company, which was incorporated in Maine early in the year, with a capital of $200,000, to build an electric railway from Seattle, Wash., northwards to Bellingham, via Everett, has acquired a lease of the Everett St. Ry., which it is understood is to form a part of a through line from Seattle to Vancouver, B.C.

Quebec and Island of Orleans Ry.—At the meeting of shareholders, Oct. 8, it was decided to survey the proposed line, which will run along the turnpike trust road between Quebec and Montmorency Falls, before the winter.

Quebec Ry., Light and Power Co.—On account of its increasing business, the company has erected a new siding about 500 ft. long at Limoilou Junction.

Sandwich, Windsor and Amherstburg Electric Ry.—The Ontario Railway and Municipal Board has approved of the lease of the Windsor and Tecumseh Electric Ry., for a term of 99 years at $100 a year, to the S., W. and A.E. Ry.

Shawinigan Falls Terminal Ry.—This company owns and operates 6.25 miles of railway and does the local switching business at Shawinigan Falls, Que. It operates on the tracks of the Canadian Northern Quebec Ry., and the St. Maurice Valley Ry., as well as on its own tracks. The rolling stock consists of two electric locomotives, a snowplow and a number of dump cars. It does not do any passenger business at present. The officers of the company are: President, J. E. Aldred; Vice-President, R. Mackay; Secretary-Treasurer, H. Murray, all of Montreal; and the operating is under the charge of S. L. Smith, Superintendent, Shawinigan Falls.

St. John (N.B.) St. Ry.—Work has been progressing in the double tracking of the line in Union St., but it is understood that an injunction is being sought to prevent the company from proceeding, owing to the narrowness of the street. It is stated that the permission to undertake the work was granted by a sparsely attended meeting of the Board of Works, and has not been ratified by the Council.

Southwestern Traction Co.—An application has been made to the Ontario Railway and Municipal Board for permission to open for traffic the St. Thomas and Port Stanley section of its line.

Toronto Ry.—A census is being taken of all passengers travelling on each route, at all times of the day, and of transfers at the various intersections, for the purpose of re-arranging the routes, and of ascertaining where, and in what manner it may be deemed advisable to increase trackage.

Toronto and York Radial Ry.—The question of the entrance to Toronto is still under discussion, but, as yet, no definite move has been taken by either of the parties concerned. The city contends that though it is ready and willing to permit an entrance upon terms mutually beneficial, the termination of any franchise granted for such purpose should be coincident with the termination of that granted to the Toronto Ry. A suggestion has been made that the city construct the lines, and enters into a contract with the T. and Y. R. Ry. to supply the service. The proposition which the city has made in the matter has been declined by the company, and it is anticipated that an application to enter the city with its cars will be made, at an early date, to the Ontario Railway and Municipal Board.

Woodstock Electric Ry., Light and Power Co.—The company's system has been changed from direct to alternating current.

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Electric Ry. Finance, Meetings, Etc.

British Columbia Electric Ry.—Gross earnings for Aug. $152,426, against $112,223 for Aug., 1906. Working expenses, $80,518; renewal fund, $10,470; net earnings, $61,438; approximate income from investments, $11,036; net income, $72,474, against working expenses, $57,781; renewal funds, $9,652; net earnings, $44,790; approximate income from investments, $9,536; net income, $54,326, for Aug., 1906.

Guelph St. Ry.—The annual statement of accounts shows that the earnings of the railway were $30,304.01, and the expenses $21,286.07. There was a net gain on the year's working of $7,017.94. A dividend of 4½% was declared, the amount payable to the city being $4,860.

Halifax Electric Tramway Co.—Earnings for Sept. $17,984.60, against $19,895.20 for Sept., 1906.

Hamilton Radial Ry.—At the forthcoming Parliamentary session application will be made to increase the bonding powers of the company, with special bonding powers in respect of proposed Toronto terminals, a bridge over the Niagara river, and ferries over the Detroit river.

Montreal Street Ry.—The annual meeting of the company was held Oct. 22, when the directors' report was submitted and approved. The usual quarterly dividend of 2½%, making 10% for the year, has been declared and paid.

Ontario and West Shore Electric Ry.—A by-law to guarantee the bonds of the company was defeated at Leeburn recently.

Quebec and Island of Orleans Ry.—The following officers and directors were elected at the annual shareholders' meeting, Oct. 8: President, Hon. C. E. Dubord; Vice-President, D. O. Lesperance; Directors: S. H. Dunn, N. Morin, A. Lefebvre, R. Rochon, N. Pelletier; Treasurer, F. Turcotte; Secretary, P. Corriveau.

Quebec Ry., Light and Power Co.—At the annual meeting held at Quebec, Oct. 10, the report of the directors was adopted, and the retiring officers and directors were re-elected. In connection with the option given to Hanson Bros. of Montreal by a large body of the shareholders, a letter was sent by that firm, dated Oct. 2, stating that the option to purchase would not be exercised. It was generally understood that the option was obtained on behalf of the C.P.R

Toronto Ry. Co.—The statement for the financial year ended Aug. 31, shows that the receipts of the company have increased about 11%, while the city's percentage has increased 21%. The gross receipts for the year were $3,349,819.94; city's percentage, $409,964; against $2,977,539.09 gross earnings and $336,630.86 city's percentage, for year ended Aug. 31, 1906.

Car earnings for Sept. $331,495.87, against $308,213.75 for Aug., 1906. Approximate car earnings for nine months ended Sept. 30, $2,532,164, an increase of $257,000 over those of same period 1906.

Electric Railway Notes.

The Amalgamated Association of Street and Electric Railway Employes of America will hold its next biennial convention at Toronto, in 1909.

The City of Toronto has been given leave to appeal from the adverse decision in its case against the Toronto Ry. Co. on the question of removing snow from the streets.

Petitions for and against the running of street cars on Sundays were submitted to the London City Council, Oct. 18, and on the advice of the city solicitor, no steps were taken in the matter, as under the present acts such a proceeding would not be legal

The writ of prohibition issued by the Quebec Ry., Light and Power Co. against the decision of the Quebec Recorder, by which it was fined $40 for a breach of agreement regarding a five-minute service on its Palace Hill route, was dismissed with costs against the company, Oct. 21.

The Montreal St. Ry. has placed twenty of its new "pay-as-you-enter" cars on its Notre Dame St. route, and an additional fifteen will be placed when completed. The company already has similar cars running on other routes, and the initial prejudice to them appears to have been overcome.

A deputation of the employes of the London St. Ry. waited on C. B. King, manager, Oct. 18, and submitted a request for increase of pay, from 16, 17 and 18 cents an hour for the first, second and third years respectively, to an all round 20 cents an hour. It was promised that the matter would be laid before the directors at their next meeting.

It is reported that the employes of the St. John, N.B., Street Railway have asked for an increase of 4c. an hour, and time and a half for Sunday work. W. Z. Earle, manager, and H. M. Hopper, secretary of the company, have stated to the press that they had heard nothing of the request for such increases, and seeing that the men were granted liberal increases two years ago, could offer no opinions as to what would be done in the matter.

W. Mee, a laborer, was awarded $2,000 damages against the Toronto Ry. Co., Oct. 22, for an electric shock sustained, it is said, when grasping the metal hand rail, in leaving a car during wet weather. A witness stated that there was no electrical connection with the hand rail, but at times during damp weather there was a leakage of current which would be harmless were the rails made of wood. An electrical expert giving evidence in the case suggested the advisability of fixing an additional wire to carry off any escaping electricity.

The Amherstburg, Ont., Town Council complains that suitable freight sheds and passenger waiting-rooms are not provided; freight rates are excessive; passenger cars are unsuitable; single instead of double truck cars are being used; fares charged between Amherstburg and Windsor are too high, and the ballasting of the road is insufficient, and has made application to the Ontario Railway and Municipal Board to issue an order compelling the Sandwich, Windsor and Amherstburg Electric Ry. to make a specific performance of its contract with the municipality.

Grain Elevator Notes.

The Pacific Grain Co., Ltd., has started a business in Calgary, Alta.

The Imperial elevator at La Salle, Man., was destroyed by fire Oct. 21.

An elevator is being erected at Tyvan, Man., with a capacity of 30,000 bushels.

The Western Canada elevator at Lyleton, Man., was burned Oct. 21 with 23,000 bushels of wheat.

The Alberta Pacific Elevator Co. has made extensive improvements and alterations at its Daysland elevator.

McIntosh & Son are applying to their elevator at Toronto an automatic scale to weigh one bushel per discharge.

The Northern Elevator Co. has announced that it will not build an elevator at Pipestone, Sask., this year, as stated.

The C.P.R. returns show that between Sept. 1 and Oct. 8, 3,268,000 bushels of wheat had been received along its lines.

G. W. Lamson, formerly a travelling auditor on the C.P.R., has been appointed C.P.R. grain agent at Winnipeg, Man.

The elevators at Fort William, Ont., are all working at high pressure. Wheat is coming in at the rate of 150 carloads a day.

The Canadian Grain Commission has appointed an inspector of export grain going in bond through the elevators at Superior, Wis.

The grain receipts at all points on the C.P.R. during Sept. amounted to 692,000 bushels of wheat, and 75,000 bushels of other grains.

The new consolidated elevator at Fort William, Ont., loaded 90,000 bush. of wheat into the steamboat Fairmount, from two spouts, in four hours recently.

E. A. Partridge, formerly President of the Grain Growers Grain Co., Sinterhita, Man., had his left foot amputated Sept. 29, as the result of an accident.

The Lake-of-the-Woods Milling Co.'s elevator at Arrow River, Man., was burned to the ground Oct. 8. About three carloads of new wheat were in the elevator at the time

A suggestion is under consideration for the towing of a floating elevator from Montreal to St. John, N.B., for use in loading vessels during the winter season of navigation.

A press report states that the C.P.R. is securing sites for the erection of elevators at Vancouver, B.C., in case the Panama Canal is completed and becomes a grain route.

A grain elevator at Carberry, Man., and owned by G. W. Murphy, containing about 20,000 bush., was destroyed by fire Oct. 21. It is stated that the outbreak was caused by a hot box on the shafting in the pit.

The Port Arthur, Ont., elevators are working night and day to accommodate the wheat that is coming in. It is said that on account of the present high prices, that farmers are rushing the grain to the elevators as speedily as they can obtain cars.

It is reported that a new dock, about 1,500 ft. long, will be constructed this winter, between the Aberdeen elevator and the G. T. Pacific terminal elevator, now being erected at Tiffin, to be worked in conjunction with the G.T. Pacific Ry.

On account of the fact that wheat hauled across the boundary in wagons cannot be shipped in bond, the C.P.R. contemplates constructing a short line at Mowbray, N.D., so that cars may be loaded and sealed there and then transferred in bond.

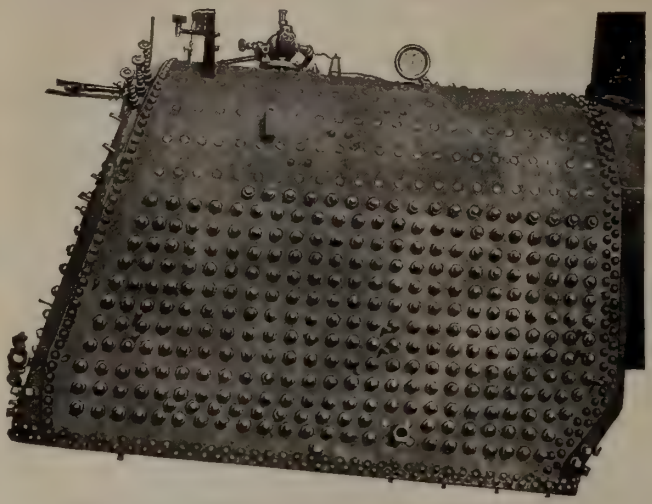
The decision in the case of the Montreal Grain Elevating Co. against the Harbor Commissioners of Montreal, whereby the plaintiff company was awarded $13,500 for the loss of the elevator St. Lawrence in the harbor, has been set aside on appeal.

The Colonial Grain Co., Ltd., has been incorporated under the Northwest Territories Ordinance, with a capital of $150,000 and offices at Winnipeg, Man. The provisional directors are: J. C. Gage, K. B. Stottard, T. H. Hanhard, W. C. Leistikow, and A. Reid, Winnipeg.

Press reports state that the McCabe Elevator Co., Minneapolis, Minn., has secured a site from the G.N.R. (U.S.) at Brandon, Man., on which it will erect a 50,000 bushel elevator. The company is building elevators on the Brandon, Saskatchewan and Hudson's Bay, and Midland Rys.

The following scale of charges has come into force at the terminal elevators at Fort William and Port Arthur, Ont.: Elevation, cleaning, spouting, including 15 days free insurance against loss by fire, ¾c. a bushel; storage for each succeeding day or part thereof, after the first 15 days, 1-30c. a bushel.

Extensive alterations and improvements are to be made at the C.P.R. steel elevator



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at the eastern end of West Fort, Fort William, Ont. Modern hopper bottoms are to be fitted to the tanks, replacing the present flat bottoms, and the other improvements to be made will enable the elevator to handle 300 cars of grain a day

Referring to a paragraph in our Oct. issue regarding the quick unloading of the steamboat Iroquois at the Montreal Transportation Co.'s elevator at Kingston, Ont., we are advised that the vessel arrived at 11 a.m., the elevator leg was lowered at 11.15, and the actual time occupied in discharging the cargo of 102,000 bush. was 4¾ hours.

The Battleford Milling and Elevator Co., Ltd., has been incorporated under the Northwest Territories Ordinance, with offices at Battleford, Sask. The following officers and directors have been elected: President, H. G. Adams, Secretary-Treasurer, F. G. Atkinson; W. R. Latimer, W. W. Livingstone, R. J. Coulter, D. T. Clink, and J. B. Macgregor, directors.

J. Love and C. R. Tryon have sold their interests in the Winnipeg Elevator Co. to E. C. Warner, F. G. Piper, F. E. Kenston, W. Douglas, of Minneapolis, Minn., and W. H. McWilliams, of Winnipeg, Man., all of whom are interested in the Canadian Elevator Co. The paid-up capital of the Winnipeg Elevator Co. is $375,000, and it owns over 60 interior elevators; and the Canadian Elevator Co. has a capital of $500,000. W. H. McWilliams will manage the Winnipeg Elevator Co.

The Ogilvie Flour Mills Co. shows a profit for the year ended June 30, of $630,685.57. It owns four elevators at Montreal, having a capacity of 1,150,000 bush.; one elevator at Fort William, Ont., 600,000 bush; three elevators at Winnipeg, of 550,000 bush.; elevators at 96 points in Manitoba, Saskatchewan and Alberta, having a capacity of 3,005,000. The total capacity of the company's elevators is 5,335,000 bush. Following are the officers and directors for the current year: President, C. R. Hosmer; Vice-President and Managing Director, F. W. Thompson; other directors: Sir G. A. Drummond, Sir H. M. Allan, E. S. Clouston, H. S. Holt, S. Ogilvie; Treasurer, S. A. McMurtry; Secretary, T. Williamson; General Manager, Western Division, W. A. Black.

MARINE DEPARTMENT

William Petersen & Co., Limited.

The Official Receiver has declared a fourth and final dividend of 1½d. in the £, making a total distribution of 3s. 5½d. in the £, in the estate of William Petersen, Limited, of Newcastle-on-Tyne, Eng. The total amount ranking for dividend was £63,625, 1s. 3d., and the estate realized £14,903, 4s. 3d. The remarks of the Official Receiver upon the final winding-up of the estate contain the following: Considerable difficulty was experienced in dealing with the shed at Montreal, and the total amount realized after deducting the expenses of recovery and realization in Canada was only £22, 18s. (The company's estimate of the value of this shed was £500). Enquiries having been made why one-fourth (£3,750) of the proceeds of the action against Armstrong, Whitworth & Co., in respect of the establishment of a steamship line between France and Canada, was paid to W. Petersen, it may be explained that for a period of nearly eighteen months Mr. Petersen, whose co-operation was essential, gave the greater part of his time to matters connected with the action. In addition, the company had in many respects been practically indistinguishable from Mr. Petersen himself, and amongst other things which followed from this he was under personal liability in respect of a portion of the company's indebtedness. The proportion was, of course, a mere matter of arrangement approved by the Committee of Inspection, but in the result there is no reason to think that Mr. Petersen has been unduly favored at the expense of the company's creditors. Of the book debts, £666, 13s. 4d. was finally received from the liquidation of the Toronto Trading Co., which, with £2,500 received from the debt owing by the Canadian Ocean and Inland Navigation Co., represents the bulk of the realization under this head. Of the surplus from securities (£12,196, 7s. 2d.), £9,785 of this amount was deemed to be the value of the company's interest, subject to mortgage in the Canadian Lake and Ocean Navigation Co. Although special efforts have been made to realize this asset nothing has been recovered for the liquidator's interest, and it does not appear that there were ever any good grounds for assuming such a value as was done by the officers of the company in the statement of affairs. The disappearance of this asset seems to remove any doubt which may have remained as to the serious insolvency of the company entirely apart from the difficulties with Armstrong, Whitworth & Co. The estimated surplus of £2,411 from the Columbia Wharf (in London, Eng.,) has proved equally valueless.

Atlantic and Pacific Ocean Marine.

The new cold storage buildings built by the C.P.R. at its dock in Liverpool, Eng., were opened Oct. 4.

The Mersey bar lightship at the entrance to the harbor at Liverpool, Eng., has been equipped with submarine signal bells, which were in operation Sept. 23.

Reports are current that the establishment of a line of steamships between Germany and Canada is under the consideration of German traders in Berlin.

A Montreal press despatch states that the Dominion Line Steamship Co. will inaugurate a passenger and freight service on the Pacific, in conjunction with the G.T. Pacific Ry., as soon as that railway is completed.

The Thomson Line steamship Hurona, which was recently damaged in collision with the Allan Liner Mongolian, had her damages, which were comparatively slight, repaired, and sailed again for Glasgow, Scotland, Oct. 3.

The Salvation Army Emigration Department has charter d ten vessels for carrying immigrants from Great Britain to Canada next season. The charters have been arranged with the Allan and the Dominion Lines.

It is reported that the Cunard Steamship Co. has accepted an offer recently made, and that in the near future theatrical performances will take place on certain of its vessels running between New York and Liverpool, Eng.

The International Mercantile Marine Co. during its past fiscal year, with a fleet of 123 vessels, having a tonnage of 1,015,761, earned $35,931,412 gross, and $8,032,631 net, or an average of $292,125 per vessel gross, and $65,206 net.

The contract between the C.P.R. and the Imperial Government, for the carrying of the mails between Great Britain and Hong Kong, expires in April, 1908. The renewal of the contract is being asked for and negotiations are in progress.

The Allan Liner Corsican, which arrived at Montreal, Oct. 15, reported encountering very heavy weather, during which a child received injuries from which it died, and two other passengers sustained a broken wrist and three broken ribs, respectively.

It is reported that the Cunard Line mail port will be moved, in the near future, from Queenstown, Ireland, to Holyhead, North Wales, on account of the non-removal of the obstruction at the entrance to the former harbor, known as Turbot Bank.

Sir Jas. Mills, chairman of the Union Steamship Co., is on a visit to Australia to consult the Government there in connection with a proposed service to Vancouver, B.C., as part of the Halifax-Blacksod Bay trans-Atlantic project for an all-British service.

The task of bringing the "all-red" route officially before the Dominion Government at the next Parliamentary session, has been entrusted to C. R. Devlin, M.P. for Nicolet, who, it is stated, will advocate the adoption of Galway as the terminal port for the United Kingdom.

A press report states that La Compagnie Generale Transatlantique of France, has the intention of placing two vessels, La Bretagne and La Gascogne, on the route between Marseilles and Montreal, and that the Dominion Government will grant a subsidy for a satisfactory service.

It was discovered that the C.P.R. steamship Empress of China, while lying at her wharf at Vancouver, B.C., Oct. 23, had sprung a leak, and was rapidly filling with water. She was quickly pumped out, the chief damage being to the cargo, with which she was partially loaded.

It is reported that the General Trans-Atlantic Steamship Co. of France will shortly inaugurate a direct line of vessels for passengers and freight between the Dominion and France. The attempt to establish a line between the two countries has been made before, but has not met with any success.

In the agreement made between the Imperial Government and the Cunard Line, at the time of the building of the Mauretania and Lusitania, it is prescribed that all the officers, and three-fourths of the crew, shall be British subjects, and that a certain proportion shall be men in the Royal Naval Reserve.

Forty years ago the Allan Line was being operated as the Montreal Ocean Steamship Co., and the biggest vessels engaged in the trade were: Austrian, 2,700 tons; Nestorian, 2,700 tons; Moravian, 2,650 tons; Peruvian, 2,600 tons; Hibernian, 2,434 tons; Belgian, 2,400 tons; Nova Scotian, 2,300 tons; North American, 1,784 tons; Damascus, 1,000 tons.

The directors of the C.P.R. have been authorized by the shareholders to build or acquire for its trans-Atlantic service two steamers of the Empress type, but to be larger and faster than the Empress of Britain and the Empress of Ireland. These steamers will, in all probability, be transferred to the Pacific Ocean, to run between Vancouver and Hong Kong.

At the annual meeting of the shareholders of the Manchester Liners, Ltd., at Manchester, Eng., Sir Christopher Furness, M.P., as President, stated that the profits for the year

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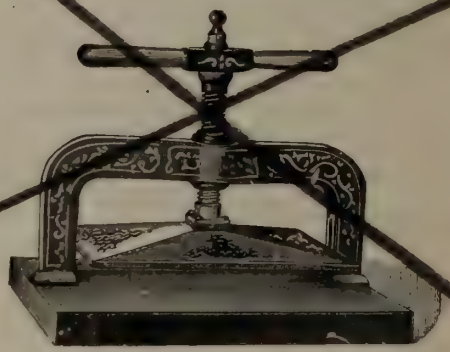

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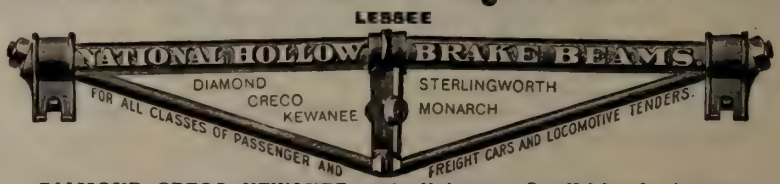

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amounted to £48,672, an increase of £10,500 over those of the previous year. He estimated that the losses sustained by the company by strikes at various ports where its vessels traded, of which Montreal is one, at £10,000.

For the five months ended Sept. 30, the passengers arriving in Quebec by the various trans-Atlantic lines, have been as follows:

	First	Second	Third	Total
C. P. R.	2,832	6,100	36,518	45,450
Allan	3,300	13,221	24,000	40,521
Dominion	3,657	4,793	9,828	18,278
Donaldson	....	1,424	2,991	4,415
Totals	6,789	25,538	73,337	108,664

It is reported that an order has been placed in Belfast, Ireland, for a new vessel for the Hamburg-American Line. She will be 800 ft. long, 50,000 tons, and driven by turbines and reciprocating engines at a speed of 18½ knots an hour. It is also stated that she is to be fitted with a theatre, tennis court, Turkish baths and several other features which have not as yet been installed in ocean liners.

A member of a firm of shipbuilders, speaking at Edinburgh, Scotland, recently, favored the building of 18-knot steamships for the Canada-Australia section of the "all-red" line, as they were cheaper and better fitted to carry a profitable deadweight than vessels of the Lusitania class, although he anticipated that eventually 25-knot boats would be placed on the route.

The new Allan Line steamship Grampian arrived in Montreal, Sept. 30, on her initial trip. She carried 40 saloon, 322 second cabin, and 204 steerage passengers. She sailed from Glasgow, Scotland, Sept. 21, at 6 p.m., and reached Quebec, Sept. 29, at 2.30 p.m., thus creating a new record for the Glasgow-Quebec route. She is a sister ship to the Corsican and was fully described in our Sept. issue, page 699.

Capt. Braes, of the Allan Line steamship Tunisian, will, it is understood, retire from the service after the last trip of the vessel to Quebec this season. He has been a commander for 40 years and was for some time captain of one of the State Line vessels, which were purchased by the Allan Line Steamship Co. Capt. Braes was transferred to the St. Lawrence route in 1899, and has been, successively, captain of the Mongolian, Parisian and Tunisian.

The Cunard S.S. Lusitania arrived in New York on her second trip Oct. 11, having completed the voyage from Queenstown to Sandy Hook in 4 days, 19 hours, 52 mins., reducing the time taken on her maiden trip by 5 hours, and creating a three-fold record, for the shortest time between a European port and New York, for the highest average daily speed, 23.99 knots an hour, and for the longest daily run, 617 nautical miles.

The launch of the new bow for the White Star S.S. Suevic took place at Belfast, Ireland, Oct. 5. The new part is 200 ft. long, fitted with deckhouses, captain's bridge, etc., and will be towed to Southampton and fitted to the other part of the vessel. The Suevic ran on the rocks at the Lizard, Cornwall, Eng., Mar. 17. Several unsuccessful attempts were made to float her, after which it was decided to cut away the fore part, and float the remainder.

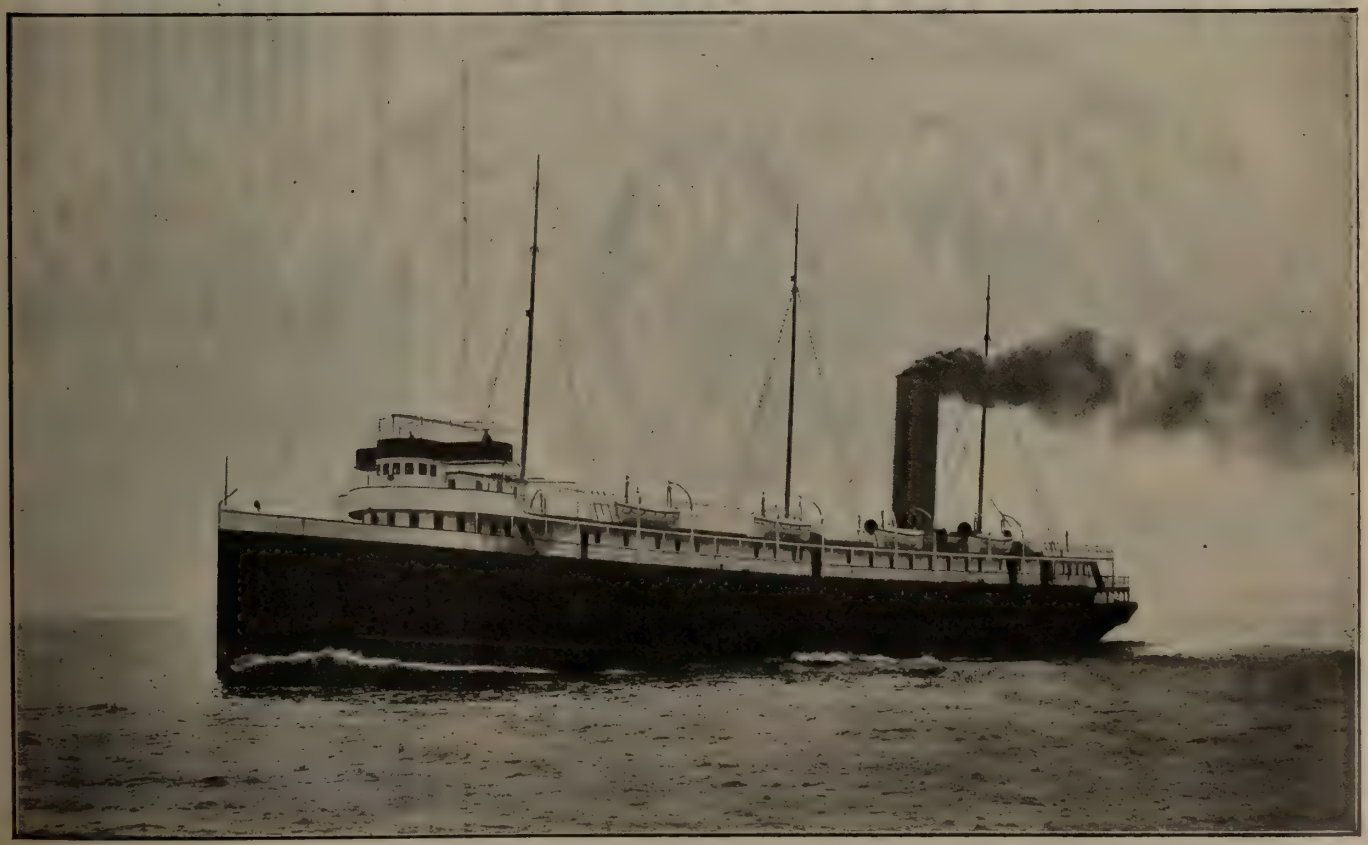
At a recent meeting of the St. John, N.B., Board of Works, a communication was read from W. Thomson & Co., regretting that in allocating the winter berths at the port, the Allan Line steamships had not been allotted accommodation at any of the berths at West St. John, where they could load grain, and intimating that the large cargo-carrying non-mail vessels of this line will probably be withdrawn from the port, as it is impossible to load grain without proper facilities.

An official of the Allan Line Steamship Co., which controls the only steamship line at present running between Canada and France, is reported to have said that no alarm was felt by the company in regard to the reports that a French company would commence a service next year; the company was fully aware of the possibilities and requirements of the service, and was prepared to meet any demand that any increase of trade may make. The Allan Line, at present, runs three vessels between Montreal and Havre on a fortnightly service.

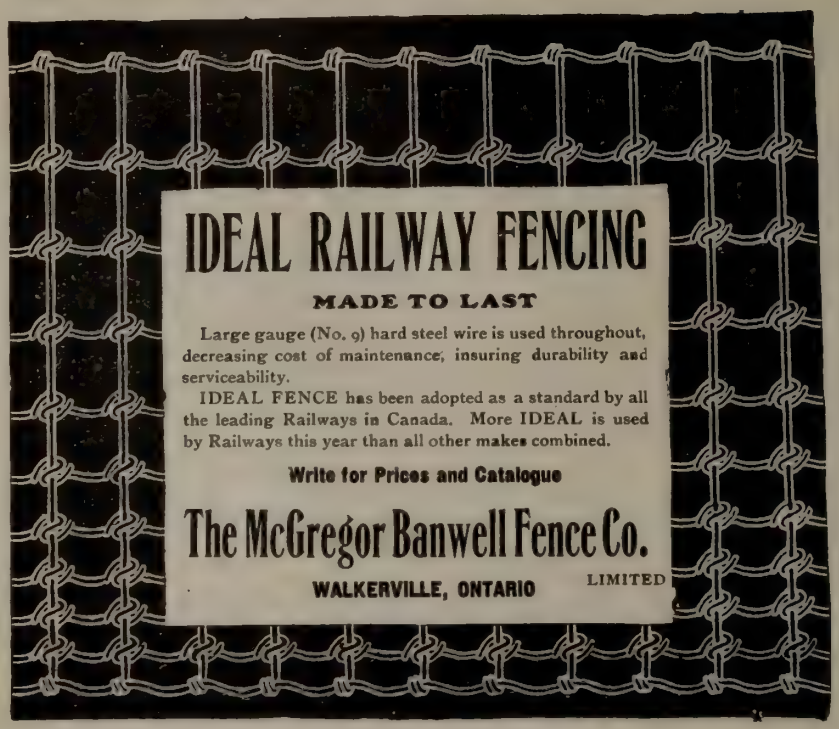
The steel screw steamship Vadso, purchased by the Boscowitz Steamship Co., arrived at Victoria, B.C., recently from Liverpool, Eng. She is to be put into the northern British Columbia service. She was built in 1881 at Gothenburg, Sweden, and has compound engines with cylinders 23 and 44 inches diameter by 30 inch stroke, 120 h.p., giving a speed of 10 knots an hour. Her dimensions are: length, 190.2 ft.; breadth, 28.9 ft.; depth, 21.6 ft. from the spar deck, 7.3 ft. between decks; gross, 914 tons; register, 699 tons, with a deadweight capacity of 1,150 tons. She was thoroughly overhauled and new boilers, steam winches, and derricks installed at Liverpool, and occupied about 80 days on the voyage.

The Thomson Liner Hurona and the Allan Line steamship Mongolian collided in a fog off Armour Point in the Lower St. Lawrence, Sept. 24, both vessels receiving sufficient damage as to render their return to port advisable. The bow of the Hurona was badly smashed, and the Mongolian had a large hole in her side from the water line up. Although there was little danger, the passengers on the Mongolian, numbering about 40, were transferred to the Hurona for the return journey, which was accomplished at slow speed. On arrival at Quebec, the passengers were transhipped to the Allan Line steamship Corinthian sailing for Glasgow. The Hurona returned to Montreal. By mutual consent the official enquiry into the causes of the accident is to be transferred to the British Courts, and the investigation will take place in Glasgow, Scotland.

A London, Eng., press dispatch, dated Oct. 20, states that an experiment is being carried out in England, which, if successful, will



C.P.R. STEAMSHIP ASSINIBOIA OF WHICH THE S.S. KEEWATIN IS A SISTER SHIP.



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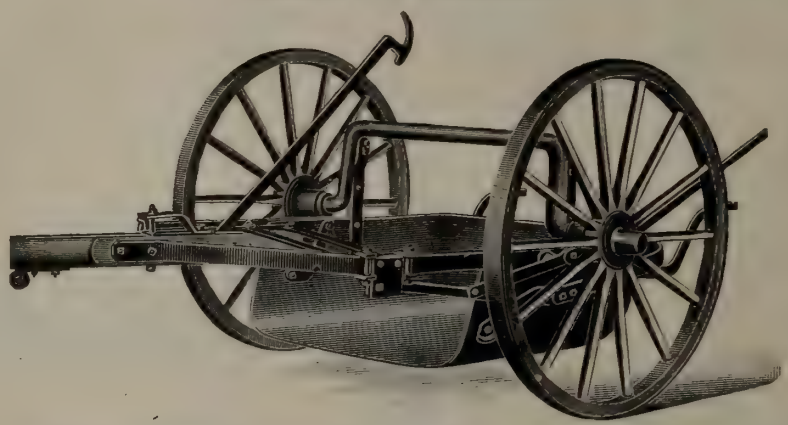

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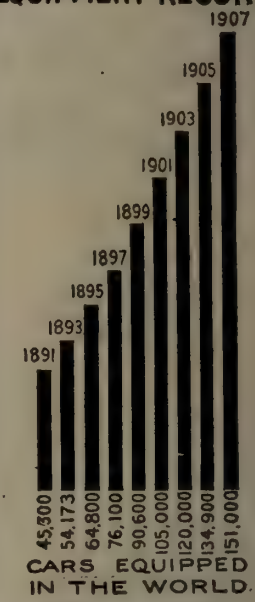

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mark a new era in marine propulsion, and achieve results which will leave present speed records far behind. The plan, of which practical tests are to be made, is that turbine engines should drive high speed electrical generators, supplying current to motors which drive the propellers, instead of as now, when the turbines are coupled up direct to the propellers. It is said that a vessel of the Lusitania class would be equipped with six turbo-generators of 20,000 h.p. each; each of the four propellers being provided with six motors of 5,000 h.p. each, five of which would do the work, the sixth being in reserve, the whole equipment being controlled from the bridge by means of a keyboard and switches. It is estimated that a speed of 30 knots could be maintained without difficulty.

The wrecked Allan Line steamship Bavarian, while undergoing repairs preparatory to being taken to New York, owing, it is stated, to an accumulation of compressed air under a temporary wooden deck, rose suddenly in the water and left the sandbank, in which she was grounded, with such force as to break the cables. Continuing in her course, she struck a salt shed, and finally ran into the steamship Carrogan Head, without, however, doing any serious damage. When ready for towing she will be removed to some dock, probably New York, for full repairs. A press report states that the steamship Carrogan Head has taken action against the steamship Bavarian, at Quebec, for $10,000 damages from collision. It is also stated that the North American Wrecking Co., Ltd., who purchased the wreck from the underwriters for £12,000, has decided to sell the vessel, as she now lies at Point Levis, Que., by public auction, before the close of navigation.

Additional particulars have been received at Montreal respecting the engines of the new S.S. Alberta, now under construction at Belfast, Ireland, for the Dominion Line. The Alberta, which will have a speed of 18 knots an hour, will be fitted with three propellers. Each of the wing propellers will be driven by a four-crank triple expansion engine, balanced, using steam at a pressure of 215 lbs. They will each have a high pressure cylinder of 30 in. diameter, an intermediate cylinder of 46 in. diameter, and two low pressure cylinders of 53 in. diameter each; the piston stroke being 54 in. The exhaust steam from the four low-pressure cylinders will pass into the turbine, which in turn drives the central propeller. In this turbine the steam will be expanded down to two pounds absolute pressure before exhausting into the condensers, of which there are two, each supplied with independent air pumps. When the ship is required to go astern the exhaust steam from the reciprocating engines will go direct to the condensers, so saving the complication of the astern turbine, while for manœuvring in and out of port the reciprocating engines only will be used, which will be more than sufficient, as under such conditions they will develop over three-fourths of the total combined horsepower of the turbine and reciprocating engines. The full speed of the reciprocating engines at sea will be about 83 to 85 revolutions, and of the turbine about 230 revolutions.

The Quebec Transport Co., Ltd., is being wound up, A. Colston being the liquidator. The liabilities are said to be about $8,000 and are being paid in full. The company was incorporated under a Dominion charter, Oct. 23, 1905, the provisional directors being: T. Harling, Montreal; J. G. Scott, General Manager, Quebec and Lake St. John Ry.; W. Power, J. T. Ross and A. E. Doucet, C.E., Quebec; the authorized capital being $100,000. The company was authorized to carry on a general freighting business; to charter or otherwise acquire vessels for the conveyance of freight, passengers and mails between ony ports in Canada or elsewhere; to carry on a general marine brokerage business; act as stevedores, etc. T. Harling was appointed Manager, and arrangements were made with the Quebec Harbor Commission for the use of wharves, warehouses, grain elevators, and other terminal facilities there. The company chartered some freight steamers in Great Britain and voyages were made in 1905. The Quebec Central Ry. and Mackenzie, Mann & Co. subsequently became interested in the venture, but difficulties were experienced in obtaining cargoes, and there were troubles with longshoremen, the result being that it was decided to abandon the project of establishing a direct freight line between Quebec and Great Britain for the present. About two-thirds of the capital of the company is stated to have been subscribed, but calls are only being made to cover the indebtedness of the company.

Marine Statistics.

The statistics of trade and navigation, recently issued, for nine months of the fiscal year ended Mar. 31, include the following figures:

Vessels entered inward, from sea:

	Number	Register Tons	Tons of Freight
Canadian	2,093	448,943	172,974
British	1,414	3,177,671	864,290
Foreign	1,754	1,224,029	627,619
All countries, in ballast	5,413	2,270,825	.....
Totals	10,674	7,121,468	1,664,883

Vessels outward, for sea:

	Number	Register Tons	Tons of Freight
Canadian	2,468	867,845	416,844
British	1,766	3,234,655	1,974,085
Foreign	2,653	1,521,770	1,037,358
All countries, in ballast	2,914	1,159,136	.....
Totals	9,801	6,783,406	3,428,287

Vessels trading on lakes and rivers, exclusive of ferries:

	Arrived at Ports		Depart'd from Pts.	
	Numb'r	Reg. Tons	Numb'r	Reg. Tons
Canadian	11,719	5,117,860	11,055	4,565,408
U. S.	8,341	3,485,551	8,815	3,522,198
Totals	20,060	8,603,411	19,870	8,087,606

Vessels (British and foreign) engaged in coasting trades:

	Number	Register Tons
Arrived	36,512	14,325,165
Departed	38,198	13,272,803

Vessels built and registered:

	Built	Tonnage	Regist'd	Tonnage
Steam	118	22,955	139	17,818
Sailing	111	10,250	118	13,817
Totals	229	33,205	257	31,635

The number of vesels sold to other countries is given as 17, having a register tonnage of 3,855, and were valued at $68,190.

THE Canadian Pacific Railway Company will apply to the Parliament of Canada, at its next session, for authority to construct a branch line from Killam, or some point in Township 44, Ranges 13 and 14 west of Fourth Meridian north-westerly to Strathcona, Alberta.

C. DRINKWATER,
Secretary.

Montreal, 8th October, 1907.

Maritime Provinces and Newfoundland.

F. McLeod, Black River, N.B., has been appointed wharfinger at that place.

By an order of the Governor-in-Council, Exploits Burnt Island, Nfld., has been made a port of entry for the colony.

The schooner Martello was driven ashore at Souris, P.E.I., Oct. 8, during a strong gale, and was completely wrecked.

W. L. McLellan, retired master mariner, of Truro, N.S., died of heart failure, at Vancouver, B.C., recently, while on a visit to some relatives.

The steamboat Island Belle is in dry dock at Kingston, Ont., undergoing repairs, after which she will go to Alexandria Bay for the winter.

The barque Wildwood, built at St. John, N.B., has been sold to the Gypsum Plaster Co., Ltd., Windsor, N.S. She is to be converted into a barge.

The Plant Line steamship Halifax is undergoing a thorough overhauling at Halifax, N.S., in preparation for her winter service in the south.

The death was reported, recently, of R. Dart, a well-known deep-sea captain, at Maitland, N.S. He retired from active service a short time ago.

The schooner Cumberland of Portland, Me., was driven ashore at the mouth of the Goose River, N.B., recently, and with her cargo is declared a total loss.

The Pickford and Black Line steamship Beta, which has been undergoing extensive alterations and repairs, was again placed on the West Indies route recently.

G. Borgal, while piloting schooner out of Pleasant Harbor, N.B., was killed through being entangled in ropes, when the vessel was struck by a squall, Oct. 10.

The wreck of the steamship Senlac was sold recently by the underwriters by public auction, and realized $9,000. C. B. Robinson, of St. John, N.B., was the purchaser.

A new 70-ton schooner was launched at Shelburne, N.S., Oct. 1. She is owned by Longmire & Sons, Bridgetown, N.S., and will run between Bridgetown and St. John, N.B.

As a result of a survey of the wrecked bark Guldrin, at Sydney, N.S., the cargo of lumber has been removed, after which it is probable the wreck will be condemned.

The schooner Atlantic, from Buenos Ayres to Sydney, N.S., reported considerably overdue, arrived at St. John, N.B., recently, having occupied over eighty days on the voyage.

Tenders have been received and are under consideration at the Public Works Department, Ottawa, for an extension to the breakwater at Great Salmon River, St. John County, N.B.

It is stated that a service will be inaugurated by the Consolidated Steamship Co., Ltd., between Fredericton and St. John, N.B., next year in connection with the Eastern Steamship Co.

A schooner of 250 tons, length, 120 ft.; breadth, 29½ ft.; depth, 12½ ft., was launched at Shelburne, N.S., recently. She has been named Roseway and was built for the West Indies trade.

The Admiralty surveying steamship Ellinor called at St. John's, Nfld., Oct. 11, on her way to Charlottetown, P.E.I., where the crew are to be paid off and the vessel berthed for the winter.

The steamship Cacouna, in entering port at Sydney, N.S., Oct. 26, collided first with the schooner Conductor, and afterwards with the wharf. The schooner was badly damaged as was also the steamer.

A report from Sydney, N.S., Oct. 21, states that three schooners, Francois Reve,

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BOSTON, MASS.

Beulah, and Katie S., have been driven ashore and wrecked during a strong easterly gale in Sydney Harbor.

It is reported that a survey is being taken for the construction of a wharf at Sydney Mines, N.S. This was being done last year, but ice conditions then prevailing, the work was abandoned.

It is understood that the two damaged steamships, Oscar II and Universe, at present in the Halifax dry dock, will be removed to New York for repairs, owing to a strike of the workmen at the former place.

A new schooner, to be named Evelyn Berry, is nearing completion at Granville Ferry, N.S. Her net tonnage is 286, and when completed she will go under the management of F. W. Pickels & Co.

The schooner Baden Powell, from New York to Chatham, N.S., went ashore in Dover Bay, Oct. 3. An attempt to tow her off was unsuccessful, so her cargo had to be removed to enable her to float with the tide.

The Newfoundland schooner Alma is reported to have been wrecked and completely broken up at Little Triton, Nfld. No trace of the crew has been discovered, and it is feared that they have been drowned.

The C.P.R. ferry steamboat Henry Plumb, running between Ogdensburg and Prescott, collided with the Montreal Transportation Co.'s barge Montreal, Oct. 7. The ferry's stern and deck were rather severely damaged.

The schooner Brilliant Star was wrecked at Cape Dolphin, N S., Oct. 8. She was built at Jeddore, N.S., in 1886, and her dimensions were: length, 46½ ft.; breadth, 18 ft.; depth, 7 ft., with 32 as her registered tonnage.

Referring to the proposal made recently by W. Thomson & Co., St. John, N.B., to the Interprovincial Navigation Co., to manage the steamship Lady Eileen, we are advised it was not accepted by the directors of the company.

The Charlo, N.B., schooner Jessie was carried up the river at Moncton Oct. 8 and grounded, where she is regarded as a total loss. Much difficulty was experienced in getting out the cargo on account of the tides washing over her.

The steamship Margaret, recently built for the eastern shore trade, has arranged to call at L'Ardoise, St. Peter's, Poulamond, Descousse, and Petit de Grat, neither of which places have until now had direct connection with Halifax.

The bark Abeona, built at Mahone Bay, N.S., in 1893, was sold recently by public auction, to A. R. Morash, of Eisenhauer & Co., for $6,500. Her dimensions are: length, 143.9 ft.; breadth, 32.2 ft.; depth, 13 ft., and 499 tons register.

The tug Rosemary brought into Lunenburg, N.S., Oct. 15, the schooner Ralph Russell, which struck on Round Rock recently, tearing away her keel and doing other damage. She was only kept afloat by continued pumping.

J. Fleming, a pilot, has retired from active service at the age of 98. He became well known some years ago, when he piloted the blockade runner Tellahassee through the southeastern passage while a fleet was waiting at the mouth of the harbor.

J. Kelly, inspector of lights and lighthouses for New Brunswick, inspected the lighthouse now in course of erection at Cape Tormentine, and the range lights which are being installed, recently, and reported that the work would probably be completed by the end of Oct.

The Newfoundland Marine Department has issued a notice to the effect that in the recent storm, the building on the end of the public wharf at Twillingate, from which the harbor light was shown, was destroyed with the wharf, and that the light will not be replaced until further notice.

The steamboat Volunda, which went on the rocks at Blomidon, N.S., recently, has been towed off by the tug Springhill, and taken to Parrsboro, N.S., for temporary repairs, after which she will proceed to New York to be thoroughly overhauled.

The schooner Empress, bound from Bridgewater, N.S., to Boston, Mass., arrived at her destination, Oct. 2, without sails, and with spars broken and planks wrenched, and her crew completely exhausted, through having been kept at the pumps for four days.

The U.S. fishing schooner Fannie E. Prescott, which was seized last spring for fishing inside the three mile limit, and taken into Halifax, N.S., and dismantled, has been released by order of the Admiralty Court, the owners having pleaded guilty and paid a fine of $200.

The Norwegian steamship Universe, which has been lying at the wharf at Halifax, N.S., since July, after being towed from White Head, where she went ashore, has been drydocked for repairs. She is 299 ft. long, and is 2,600 tons gross. An extension of 40 ft. had to be put on the cradle to accommodate her.

J. H. Longmire & Sons' new schooner was launched at Shelburne, N.S., recently, and named Frances. Her dimensions are: length, 85 ft.; breadth, 20.8 ft.; depth, 8 ft., with a tonnage of 72 gross. She is fitted with twin screw gasoline engines, and will be placed on the run between Bridgetown, N.S., and St. John, N.B.

During the storm which swept over the province about Oct. 8, the wrecked schooner Mary E. Smith was broken in two at Whitehead, N.S., the forward part being held down by chains at the eastern entrance to the harbor. It is regarded as a menace to navigation. Attempts to remove her were unsuccessful.

A Montreal despatch states that a steamship service is to be established between Montreal and Newfoundland next spring. Two boats, it is said, will be placed on the route, calling at P.E.I. and Cape Breton ports, with accommodation for all classes of passengers, and having a speed of 18 knots an hour.

One of the four new wharves which are to be constructed at St. John, N.B., is almost completed, a second is in course of construction, and dredging contracts have been awarded for the remainder. It is anticipated that in about two years accommodation will be found for three times as many vessels as there is to-day.

The schooner Agility, owned by I. Porrier, West Arichat, N.S., went ashore on Cape Dauphin at the entrance to the Bras d'Or lakes recently, and it is thought to be impossible to re-float her. She was built at Port Medway, N.S., in 1858, and her dimensions are: length, 75.6 ft,; breadth, 21.8 ft.; depth, 8.2 ft.; registered tonnage, 72 tons.

The St. John, N.B., city treasury board has adopted increased winter port tariffs as follows: Cattle, 3c. each; general goods, 10c. a ton; lumber, 10c. a thousand. This is the same as the summer rates, the former winter rates being 2c. each for cattle and 5c. a ton for general goods. For lumber, the rate formerly was charged only on that loaded over the wharf.

A London press despatch stated recently that prior to his departure from England, Hon. L. P. Brodeur said that tenders would shortly be requested for a new icebreaker to work between Prince Edward Island and the mainland of Newfoundland. It was also stated that the price would probably be about $450,000, and the speed 17 knots an hour.

The schooner Mary E. Smith struck a sunken rock at Whitehead, while bound from Boston, Mass., to Sydney, N.S., recently, and sank in deep water. She was built at La Have, N.S., in 1903, and was owned by her captain and his brother, who purchased her from her original owners last winter. Her dimensions were: length, 93.2 ft.; breadth, 25.2 ft.; depth, 10 ft., and 99 tons register.

The C.P.R. is not prepared to accept the schedule of winter port rates recommended to the St. John, N.B., council, recently. W. Downie, Superintendent, says that the company felt that the rates should remain as they were last year as regards general freight and cattle, and that he understood that a schedule was to be submitted to the transportation companies before any action was taken.

A resolution embodying their belief in the advantages to be gained by the construction of a tunnel between the mainland and Prince Edward Island, and impressing on the Government the desirability of taking prompt steps for the commencement of the work, was passed at a meeting at Charlottetown, P.E.I., Oct. 9, by no less a body than the Maritime Funeral Directors' Association.

All attempts at floating the steamship Turret Bell, which stranded some time ago at St. Peter's Bay, P.E.I., have been abandoned for this year. After lightening her by about 900 tons, thus lessening the draft 3 ft., and being made watertight and pumped out, it was found impossible to float her owing to insufficient rise of tide. She has been made secure, and further attempts to get her afloat will be made in the spring.

Hon. W. Pugsley, Minister of Public Works, speaking to the St. John, N.B., Board of Trade, said he would not be satisfied until the whole of Canadian grain was exported from Canadian ports. At present, he said, 60% is shipped from other ports, and to overcome this, Canadian Atlantic ports should be equipped to handle the business; and he had ordered the dredge Fielding to come to St. John, making three dredges at work in the harbor.

The steamship Isaac N. Veasey, which has been lying under water off Kelley's Beach, N.S., for nearly a year, was sold by auction recently, to Larder Bros., Sydney, N.S., for $1,900. Her registered number was 116,742; dimensions: length, 96 ft.; breadth, 17½ ft.; depth, 7½ ft.; 89 tons gross, 60 tons register, with engine of 7½ h.p. driving a screw. She was built at Pocomoke, Md., in 1888, and was owned by R. G. Roach, Bay of Islands, Nfld.

The Halifax, St. John and Jamaica Steamship Co.'s service, inaugurated Oct. 18, between Halifax, St. John and Jamaica, will be a fortnightly one. Two vessels named Senator and Amanda have been chartered, and are already on the route, and a third will be added if found necessary. Both vessels have been specially constructed for the fruit carrying trade, and the holds are steam heated throughout for winter service. There is also first-class passenger accommodation.

The Magdalen Islands Steamship Co.'s steamship Amelia, on the route between Souris, P.E I., and the Magdalen Islands, left the former place, Oct. 7, on the trip which usually occupies about eight hours, and grave fears are entertained for the safety of the passengers and crew, as she has not since been heard of. The Amelia was built at Ayr, Scotland, in 1894, is a 70 h.p. screw steamer of the following dimensions and tonnage: length, 145 ft.; breadth, 22.8 ft.; depth, 9.9 ft.; 357 tons gross, 103 tons register.

The death has occurred at Yarmouth, N.S., of J. Powell, at the age of 85. He was a well-known shipbuilder in the old days of wooden vessels, and often related his connection with what was considered a remarkable feat at that time. In 1858, the bark Caroline was cut in two, and lengthened by 40 ft. In hauling up the vessel, the services of all the local shipwrights, Trinity servicemen, and 100 of the 9th Regiment, were requisitioned, and while working the capstan, a fiddler was engaged to encourage them in their efforts.

The steamship Cabot, which arrived at Sydney, N.S., recently, brought, as part of her cargo, a complete wrecking outfit, with pumps, for the wrecking plant about to be established by the Dominion Coal Co. Capt. Holmes, formerly of the Cacouna, went to Grangemouth, Scotland, to bring her out, and the voyage occupied sixteen days. The Cabot is owned by the Steamship Cabot Co., Ltd., formed in connection with the Dominion Coal Co., and will be used in the coal carrying trade. A full description of the vessel was given in our issue of July.

D. J. Purdy, St. John, N.B., has purchased from the Sincennes-McNaughton Line, Ltd., Montreal, the steamboat Sincennes, to replace the Crystal Stream destroyed by fire in June, on the Washademoak route. The Sincennes, register number 100,725, is a paddle steamer of 34 h.p., and was built at Montreal in 1893. Her dimensions are: length, 142¼ ft.; breadth, 24¼ ft.; depth, 8¼ ft.; tonnage, 228 gross, 129 register. She has been used as a tug on the Richelieu route for several years. The price given is stated to be $25,000.

The steamship Borgestad, chartered by the Dominion Coal Co., Sydney, N.S., for the coal trade with Montreal, was built at Middlesbrough, Eng. Her dimensions are: length, 372 ft.; breadth, 51 ft.; depth, 29 ft. She is capable of carrying 7,000 tons of coal on a draft of 23 ft. 1 in., at an average speed of 11 knots. Being a perfect self-trimmer, no coal trimmers are required, either in loading or discharging, which is done at the rate of about 1,000 tons an hour. Outwardly, her appearance is similar to the vessels employed on the Great Lakes, her engines being placed right aft, but the general rig is conspicuous by its absence. In place of the usual masts she is fitted with 10 derrick posts in pairs, which, although not necessary for the coal trade, will be made use of when the vessel is placed in the general trade during the winter. The boat is constructed on the cantilever system, which is probably the best yet conceived for general lake service, and she has a large capacity suitable for grain, coal or iron ore. Her engines have cylinders 26, 42 and 70 inches diam., by 48 ins. stroke, of 2,200 i.h.p., supplied by one boiler, 11 ft. 6 ins. long, by 15 ft. diam., and one 10 ft. 6 ins. long, by 11 ft. diam., working at 180 lbs. pressure, with forced draught.

THE Manitoba and Northwestern Railway Company will apply to the Parliament of Canada, at its next session, for authority to construct a branch line from Theodore on its main line south-easterly to connect with the Russell branch in Township 20 or 21, Range 28 west of the principal meridian.

H. C. OSWALD,
Secretary.

Montreal, 8th October, 1907.

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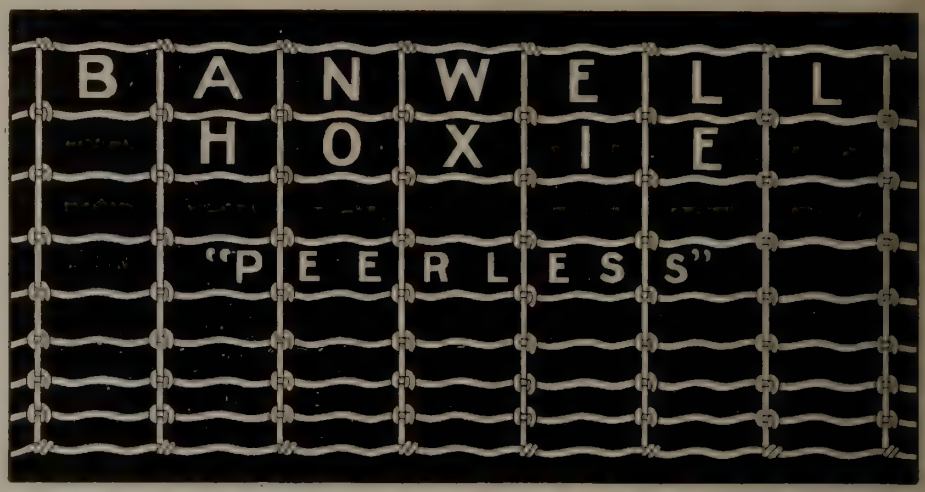

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C.P.R. LANDS

THE CANADIAN PACIFIC RAILWAY COMPANY have 10,000,000 acres of selected lands for sale in Manitoba, Saskatchewan and Alberta.

Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian (generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
All prices are subject to change without notice.

TERMS OF PAYMENT

An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160 Acres	at	$ 8.00	per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
"	"	9.00	"	"	215.70	"	"	"	73.46	"	"	180.00
"	"	10.00	"	"	239.70	"	"	"	81.62	"	"	200.00
"	"	11.00	"	"	263.60	"	"	"	89.78	"	"	220.00
"	"	12.00	"	"	287.60	"	"	"	97.96	"	"	240.00
"	"	13.00	"	"	311.55	"	"	"	106.10	"	"	260.00
"	"	14.00	"	"	335.60	"	"	"	114.32	"	"	280.00
"	"	15.00	"	"	359.50	"	"	"	122.44	"	"	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

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F. T. GRIFFIN, Land Commissioner, Winnipeg.

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Province of Quebec Marine.

The Quebec Transportation and Forwarding Co.'s barge F. L. Danforth was lost in a gale recently near the mouth of the Pentecost River.

The dredge Beaujeu, built at the Government yards at Sorel, has been on trial in Lake St. Peter, and when completed will be used on the St. Thomas flats, where there is a dangerous shoal.

The Government steamship Arctic, in charge of Capt. Bernier, who undertook a voyage amongst the islands within the Arctic circle, reached Quebec, Oct. 19, after an absence of fifteen months.

The Montreal Harbor Commissioners have deposited with the Dominion Minister of Finance, debentures amounting to $125,000, to cover advances on account of expenditure on the new steel sheds erected on the harbor.

A channel has been cut through the obstruction in the Lievre River, caused by a landslide at Poupore, Que. The steamboat Agnes passed through to High Falls, Oct 6, and will continue on the route until the end of the season.

The Montreal harbor revenue from the opening of navigation to Sept. 30, of this year, amounts to $231,830, as compared with $227,913 for the corresponding period last year. The amount for Sept. was $49,079, against $47,425 for Sept., 1906.

The Montreal Transportation Co.'s barge Jet, in tow of the tug Olive, bound from Prescott to Montreal, was run down by the steamboat Norwalk, from Quebec to Detroit, Oct. 23, in Lake St. John. The barge immediately sank, the crew reaching another vessel in safety.

Col. Gourdeau, Deputy Minister of Marine, accompanied by F. W. Cowie, Engineer, returned recently from a trip of inspection of the dredging fleet working above and below Quebec. The work carried out by the dredgers Tarte and Galveston, in Lake St. Peter and on Beaujeu Bank, respectively, is satisfactory.

Hon. L. P. Brodeur, Minister of Marine, accompanied by Col. Gourdeau, Deputy Minister of Marine, F. W. Cowie, Engineer, and members of the Montreal and Quebec Harbor Commissions, and Boards of Trade, Pilotage Association, and Shipping Federation of Canada, conducted the annual official inspection of the St. Lawrence ship channel, Oct. 17, 18 and 19.

In view of the increasing size of vessels coming up the St. Lawrence, and the greater height of their masts and funnels, a question as to the height of the Quebec bridge has arisen. A letter on the subject from the chairman of the Montreal Harbor Commissioners was read at a recent meeting of the Board of Trade there, and left over for future consideration.

T. Harling, who is prominently identified with the shipping interests of Montreal and Quebec, and who was director and manager of the Quebec Transport Co., Ltd., at present in liquidation, has been appointed head of the Port of Bristol Agency for the Dominion, the object of which is to call the attention of shippers and merchants on this side to the advantages of Bristol, Eng., as a port for general trade with Canada.

The Richelieu and Ontario Navigation Co.'s steamboat Montreal, and the St. Lawrence Canadian Navigation Co.'s steamboat Colonial, collided as the latter vessel was leaving the dock at Sorel recently. The damage was slight, neither vessel having to discontinue her trip. Misunderstanding of signals was said to be the cause of the accident, and as the matter has been settled privately between the companies concerned, no official enquiry is deemed necessary.

George Hall Coal Co., of Canada, Ltd., has been incorporated under the Companies Act of the Revised Statutes of Canada, with a capital of $200,000 and offices at Montreal, to carry on the business of coal merchants, and also the business of carriers by water of passengers, goods and other freight, and to build, acquire and operate steam and other vessels in connection therewith. The provisional directors are: G. Hall, J. C. Howard, Ogdensburg, N.Y.; A. G. Yates, Rochester, N.Y.; G. G. Foster, and C. G. MacKinnon, Montreal.

A Montreal press despatch states that the Quebec Ferry Co. is about to establish a railway ferry across the St. Lawrence at Quebec, owing to the time it will be neceesary to take before the Quebec bridge can be completed. Even after the bridge is open for traffic, it is claimed that there will be a considerable car ferry business to do opposite the city. The ferry, it is stated, will be in operation in June, 1908. It will have propellers at each end, so that it may run in and out of the wharves without the necessity of turning. The terminal points have not as yet been decided upon.

An additional scheme for the development of water power by a coalition of Canadian and U.S. companies, at Mille Roches, on the River St. Lawrence, which has been placed before the International Waterways Commission, has been objected to by the Montreal Board of Trade and the Dominion Marine Association, on the ground that it would, if carried out, interfere with the navigation of the river. It is, however, claimed by the companies, that the navigation would be improved by doing away with lock 21 in the canal, thus making a saving of four hours to vessels on the round trip, and vessels being able to run at full speed up the river.

The Shipping Federation of Canada intends shortly to petition the Dominion Government to make Montreal a free port. Complaint has been made that the cost of operating a line of steamships to Montreal is increasing each year, and that something should be done promptly, or the various companies using the port may withdraw. Excessive pilotage fees, and a high rate of insurance on both hull and cargo, high harbor dues, and rentals inconsistent with the facilities offered, are amongst the points brought forward The matter is to be brought before the Minister of Marine at the earliest possible opportunity.

A continued increase is shown by the statistics for Sept. in the trade passing through the Lachine canal. The greatest increase is in grain, but there is also a general increase in all merchandise as well as in passengers and tonnage of vessels. The figures for the month's trade are as follows: Canadian vessels, 190 steam, 279 sailing; American vessels, 31 total; total registered tonnage, 98,092, against 67,956 tons for Sept., 1906. Passengers carried up, 7,313; general merchandise of all kinds, carried up, 18,655 tons; lumber, 3,395 million feet; hard coal down to harbor, 15,633 tons; hard coal unloaded in canal, 37,726 tons; soft coal up, 20,929 tons; grain, 3,442,014 bushels, against 1,576,060 for Sept., 1906. Other items also show considerable increases over the figures shown for the same period last year.

The Quebec Steamship Co.'s steamship Guiana, built by Sir J. Laing & Son, Ltd., Sunderland, Eng., for the West Indian service, is fitted with accommodation for 65 first-class passengers, berthed in a steel house on the spar deck, the accommodation for steerage passengers being at the forward end of the spar deck and also on the main deck. The saloon on the bridge deck, accommodating 70 persons, has a large entrance hall with lounges; the smoke room and music room being on the boat deck. The life-saving apparatus meets all the regulation requirements and includes six lifeboats and two cutters. There are four cargo hatches, with all the latest arrangements for the quick handling of cargo, including six winches and steam windlass. The boat is lighted throughout by electricity. The engines are triple expansion, with cylinders 26, 43 and 71 inches diam., by 45 ins. stroke, supplied by three single-ended boilers, each 11½ ft. long by 14 ft. diam., working at 180 lbs. pressure under forced draught. Her dimensions are: length, 345 ft.; breadth, 44 ft.; depth, moulded, 27½ ft., and she is capable of carrying 5,000 tons on a draught of 23 ft., at an average speed of 13 knots an hour. She is classed at Lloyds 100 A1, is provided with an English Board of Trade passenger certificate, and has been built to pass the U.S. survey.

NOTICE—The West Ontario Pacific Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may construct the railway and branches which it has been authorized to construct, and for other purposes.

CHARLES DRINKWATER,
Secretary.

Dated 1st day of October, 1907.

NOTICE—The Campbellford, Lake Ontario and Western Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may construct the railway which it has been authorized to construct, and for other purposes.

H. CAMPBELL OSWALD,
Secretary.

Dated 1st day of October, 1907.

NOTICE—The Lindsay, Bobcaygeon and Pontypool Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may construct the extension of its railway branches which it has been authorized to construct, and for other purposes.

THOS. STEWART,
Secretary.

Dated 1st day of October, 1907.

NOTICE—The British Columbia Southern Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time for the commencement and completion of the railway from Fort Steele to Golden in British Columbia which it has been duly authorized to construct, and for other purposes.

H. C. OSWALD,
Secretary.

Dated 1st day of October, 1907.

THE Esquimalt and Nanaimo Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which the company may commence and complete the railway and branches, the construction of which was authorized by section 2 of chapter 92 of the Dominion Statutes of 1906, and for other purposes.

W. F. SALSBURY,
Secretary.

Dated at Vancouver, 26th September, 1907

NOTICE—The South Ontario Pacific Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may construct the railways and bridge which it has been authorized to construct, and for other purposes.

CHARLES DRINKWATER,
Secretary

Dated 1st day of October, 1907.

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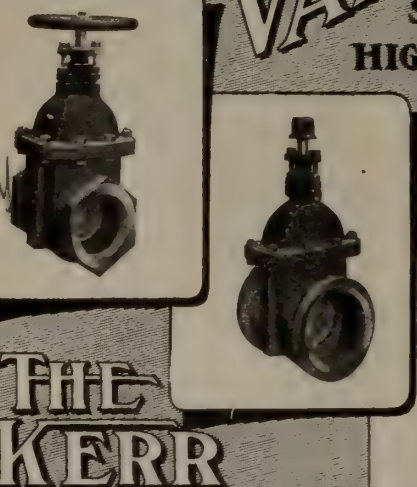

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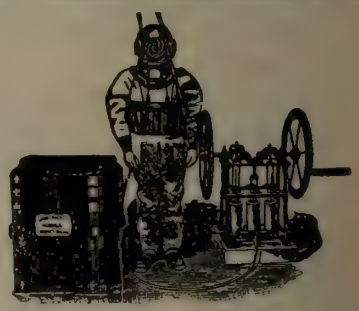

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Ontario and the Great Lakes.

H. M. Burk, who died at Bowmanville, Ont., Oct. 13, aged 85, was for many years owner and master of vessels trading on the Great Lakes.

The steamboat Edmonton, chartered by J. J. O'Connor, Port Arthur, brought the first shipment of pig iron from Port Arthur to Toronto, Oct. 9.

Supplementary letters patent have been issued authorizing the increase of the capital of the Dominion Dredging Co., Ltd., from $145,000 to $500,000.

Capt. Fitzgerald, of the steamboat Alaska, was accidentally drowned at Driftwood Cove, by the capsizing of a boat in which he was going ashore, recently.

The Midland Navigation Co.'s steamboat Midland Prince grounded near the Sault recently. She was repaired temporarily, and proceeded on her journey.

During a recent gale, the Knapp roller boat broke adrift from her moorings at the Polson Iron Works wharf, Toronto, but was captured without having caused any damage.

It is expected that the hull of the Quebec Transportation and Forwarding Co.'s steamboat Orion, recently wrecked on Calf Island, in Lake Ontario, will be converted into a barge.

The Amherstburg tug boat Christian was burned to the water's edge in the lower Detroit River, Oct. 16, the captain and crew escaping on a raft. The boat was valued at $10,000.

Tenders were received Oct. 24 and 25, for the construction of a wharf and stone approach at Colborne, Ont., and an extension to the wharf at Southampton, Ont., respectively.

The St. Paul Fire and Marine Insurance Co. has been granted a license to transact in Canada the business of fire insurance and inland marine insurance, with R. J. Dale, of Montreal, as chief agent.

The work of raising the wreck of the barge Resolute, which went down near the western entrance to Toronto harbor last year, has been commenced, and two scows and a diver are engaged thereon.

Tenders have been received and are under consideration by the Dominion Public Works Department, for the construction of a dam across the Montreal river at Latchford, in the district of Nipissing, Ont.

The sand pump in use at Hamilton, Ont., took fire Oct. 2, and considerable damage, the amount of which has not been estimated, was done. The cause of the outbreak was said to have been an overheated boiler.

Reports that the Canadian Shipbuilding Co.'s Toronto yard would be closed, pending the settlement of the machinists' and plumbers' strikes, on the completion of the G.T.R. car ferry under construction there, were denied Oct. 24.

The Carleton, the new steamboat built by the Greenock and Grangemouth Dockyard Co., on the Clyde, Scotland, for F. E. Hall & Co., Montreal, arrived in Quebec recently, and loaded her first cargo of pulpwood for Green Bay, Mich.

The Northern Navigation Co. has, according to reports, invited tenders for a passenger and freight vessel, 259 ft. long, to take the place of the Monarch which was wrecked recently. It is intended that the vessel be ready for the opening of navigation next year.

Application has been made by the Toronto General Trusts Corporation for the administration of the estate of A. Poirier, a mariner formerly employed by the Calvin Co., Garden Island, Ont., and who is presumed to be dead, not having been heard of for fifteen years.

J. Budds, lighthouse keeper, who died at Oswego, N.Y., Sept. 30, sailed in the first vessel that carried coal on Lake Ontario, in 1838. He was also present at the burning of the steamboat Robert Peel, and was one of the two members of the crew of the Antelope rescued from the wreck in 1857.

The steamship Bermuda, which grounded in Lake St. Francis and was floated again Oct. 3, in proceeding up the river, broke her rudder chain at Cat Island, near Farrans Point, and swung round with the current and again grounded. She was bound from Quebec to Wisconsin with pulpwood.

The Richelieu and Ontario Navigation Co.'s steamboat Picton, which was burned out and sank at her slip in Toronto harbor some time ago, was raised Oct. 14, but it is not known, as yet, what is to be done with her, though it is understood that the company have abandoned her to the underwriters.

The steamboat Cyprus, owned in Cleveland, Ohio, sank at Deer Park, near Whitefish, in Lake Superior, Oct. 11. The cause of the disaster was the shifting of the cargo during a storm. She carried 8,000 tons of iron ore, and of the entire crew, only one reached the shore. The number of lives lost is given as 22.

The Montreal and Great Lakes Steamship Co.'s steamboat Bickerdike, while bound from Montreal to Toronto, put into Kingston recently with a fire, due, it is stated, to spontaneous combustion, in her hold. The fire was speedily extinguished, and apart from comparatively small damage to cargo, everything was uninjured.

The U.S. steamboat Sevona, which sank two years ago on a reef near Sand Island, Apostle Islands, in Lake Superior, is to be removed as soon as the weather permits. The crest of the wreck is about 6 ft. below the surface of the water, and is considered dangerous to navigation. The place is marked by two unpainted spar buoys.

Leave to appeal to the Supreme Court of Canada has been granted the Hamilton Steamboat Co. in its case against R. O. and A. B. Mackay, Hamilton. In the lower court judgment was originally given for the plaintiff company, and in an appeal by the defendants, the judgment was reversed. It is now sought to have the original judgment restored.

Water was turned into the new channel of the St. Mary's River on the Michigan side, Oct 14. The channel is 300 ft. wide with a depth at the minimum stage of water of 22 ft. The old channel will be used solely for upbound boats, the heavily laden downbound boats using the new channel. The project has cost upwards of $3,000,000.

Dunelm, Ltd., has been incorporated under the Ontario Companies Act, with a capital of $100,000 and office at Hamilton, Ont., to carry on in all its branches the operation and business of a navigation and transportation company. The provisional directors are: R. O. Mackay, W. Southam, J. P. Steedman, T. Ramsay and G. Somerville, Hamilton, Ont.

Notice has been filed that at the next session of the Ontario Legislature, application will be made on behalf of the municipality of Collingwood, Ont., for an Act to ratify an agreement dated May 13, 1907, conveying certain land between Hurontario and Pine Streets, Collingwood, together with water frontage, to the Collingwood Shipbuilding Co., Ltd.

The steamboat Metamora struck a shoal in Shawanaga Bay recently, and subsequently took fire and was completely destroyed. She was owned by Playfair & Co., Collingwood, and was built at Cleveland, O., in 1864, her dimensions being: length, 115 ft.; breadth, 39¼ ft.; depth, 10¾ ft.; tonnage, 239 gross, 152 register; with engine 94 h.p., and screw propeller.

The schooner Ontario finding difficulty in entering the harbor at Southampton, Ont., Oct. 8, owing to the disablement of the North range light, attempted to make the Saugeen River harbor, and struck on the bar at the mouth of the river, becoming a total wreck. She was built at Goderich, Ont., in 1867, and her dimensions are: length, 105 ft.; breadth, 23 ft.; depth, 9½ ft.; 150 tons register.

The schooner Erie Stewart from Chatham to Parry Sound, while endeavoring to make the harbor at Southampton, Ont., Oct. 7, struck the north breakwater on Chantry Island, disabling the North range light, and sank, becoming a total loss. She was built at Port Dover, Ont., in 1874, and her dimensions were: length, 117½ ft.; breadth, 23½ ft.; depth, 10½ ft.; 230 tons register.

The U.S. Lake Survey reports the stages of the Great Lakes for Sept. as follows:

	Ft. above tide water in New York
Lake Superior	603.13
Lake Michigan	581.39
Lake Huron	581.39
Lake Erie	572.77
Lake Ontario	246.52

With the exception of Lake Superior, which made an unusual rise during the month, all the lakes have lowered. During October, it was stated, Lake Superior should hold its level, while the others should fall as follows: Lakes Michigan and Huron, 2¾ ins.; Erie, 3½ ins.; and Ontario, 4½ ins. Lake Ontario is 8½ ins. above the average Sept. height, 6 ins. above last year and 2½ ft. above that of Sept., 1895.

The Ontario Government has, it is stated, acquired from J. H. Walker, of Walkerville, Ont., for $10,000, his private yacht Lurline for use in the fishery protection service. The Lurline, registered number 90,780, was built at Windsor, Ont., in 1888, and is a screw steamer with engines of 100 h.p. Her dimensions are: length, 78.8 ft.; breadth, 16.3 ft.; depth, 7.8 ft.; tonnage, 66 gross, 40 net.

Hon. W. Pugsley, Minister of Public Works, received a deputation from Toronto, Oct. 11, in reference to harbor improvements there. Complete plans for the new entrance, giving safe admittance to vessels drawing 21 ft., were submitted and explained by J. G. Sing, engineer. Mr. Pugsley assured the deputation that a work so necessary as this was shown to be, would have his hearty co-operation.

The Haileybury Brick and Tile Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of $50,000 and office at Haileybury, to manufacture and sell tile, brick and clay products, etc., and in connection therewith to operate freight and other boats. The provisional directors are: A. J. Murphy, B. C. Beach, Haileybury; C. F. McArthur, D. McArthur, and E. E. Wilson, Kenmore, Ont.

The Delaplante Lumber Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of $400,000 and office at Toronto, to carry on the business of lumber manufacturers, and in connection therewith to acquire and operate boats, barges, vessels, etc. The provisional directors are: A. J. Delaplante, Buffalo, N.Y.; C. W. Wilkinson, D. McLaren, H. T. Kelly, Toronto; and L. A. Delaplante, East Toronto, Ont.

The steamboat being constructed by the Polson Iron Works, Ltd., Toronto, for Government service on the Trent Valley Canal, was launched at Peterborough, Ont., Oct. 2, and named Bessie Butler, as a compliment to the daughter of M. J. Butler, Deputy Minister of Marine. The vessel is 80 ft. long, with 17 ft. beam, and 18 ft. deep, and when completed will be capable of carrying 100 tons, with a speed of about 15 miles an hour.

A deputation of those interested in the Georgian Bay Canal project visited Duluth, Minn., recently, it is stated, for the purpose of inspecting locations for proposed dock constructions there in connection with the

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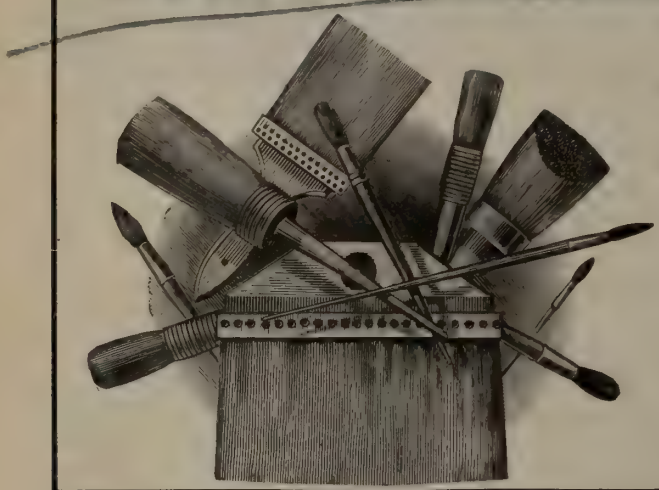

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canal scheme. Reports are current that a direct line of steamships is contemplated between Duluth and European ports, and that the Duluth, Rainy Lake and Winnipeg Ry. will be utilized as the outlet for the Northwest grain territory.

The breakwater at Port Stanley, Ont., which the Dominion Government is constructing in Lake Erie will, when completed, be 35 ft. wide, and extend 1,000 ft beyond the present Pere Marquette Ry.'s pier, 200 ft. in a southwesterly direction, and 800 ft. southeasterly Two cribs have been sunk in position with their surfaces 1 ft. below the level of the water. Other cribs will be placed shortly, and mariners are cautioned when approaching the harbor, on account of the obstructions.

The Montreal Transportation Co. is having built at Grangemouth, Scotland, a tug, 135 ft. long, 25 ft. broad, and with 14 ft. depth of hold. The engines will be of the triple expansion surface condensing type, with cylinders 17, 27, and 43 ins. diam. She will be equipped with electric light, steam windlass and capstan, and will be sufficiently seaworthy to go out in practically all weathers on the Great Lakes, and being supplied with salt water condensers, could, if necessary, trade below Quebec.

The Kingston Shipping Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of $100,000 and offices at Kingston, to carry on the business of forwarders, carriers, wharfingers, ship and vessel builders and owners, and also to run and own steam and other vessels, and to charter and hire such for the purposes of its business. The provisional directors are: H. A. and S. C. Calvin, Garden Island, Ont.; D. D. Calvin, H. W. Richardson, Kingston, Ont.; S. H. Dunn, J. T. Ross, W. A. Marsh, Quebec, Que.

In response to a deputation to urge the importance of pressing on with the construction of the island breakwater in Toronto harbor, the contract for which was let a considerable time ago, Hon. W. Pugsley, Minister of Public Works, stated that the contractors had already been notified to begin the work at once, but that some changes in the plans had been desired by them. A promise had, however, been given that the work would be promptly commenced, and rushed through so that any further demolition of the island beach would be prevented.

The U.S. Bureau of Census has issued a report on the traffic of the River St. Lawrence and the Great Lakes, comparing the particulars as taken at 1889, and in 1906, from which the following have been taken:

	1889	1906
No. of vessels	2,737	2,965
Gross tonnage	920,294	2,391,042
Valuation	$48,580,174	$130,722,040
Gross revenue	$35,463,852	$65,278,487
No. of passengers	2,235,993	13,761,014

In addition to these, there were 206 vessels, valued at $690,450, and 3,170 boats and gasolene launches valued at $317,060, engaged in the fishing industry in the Great Lakes.

The Merchants Steamship Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of $150,000 and office at Toronto, to build, operate, and deal in ships, vessels and boats of every nature, together with all appliances entering into the construction or equipment thereof; to transport merchandise and passengers by land and water; to build wharves, docks, machinery and other equipment, and to carry on the business of colliery proprietors, etc. The provisional directors are: A. G. Ross, J. F. H. McCarthy, B. Osler, and J. M. Ewing, of Toronto.

The work of cutting the steamboat Assiniboia in two, to allow of her passage through to the Upper Lakes, was successfully accomplished Oct. 3, having occupied only four working days. The contract stipulated that no part of the steel or woodwork of the vessel be injured in the operation, and no damage of any kind is reported to have occurred. After the correct adjustment of ballast, the parts were taken in tow by the tugs Lord Strathcona and Cruiser, and started on the trip to Buffalo, N.Y., where they will be pieced together again, under the superintendence of her designer, H. Calderwood. The Keewatin, sister ship of the Assiniboia, has been placed in the dry dock at Levis, Que., to undergo a similar operation. It is stated that the Keewatin touched bottom in coming into port, and is somewhat damaged, but the extent cannot be ascertained until after examination in the dry dock.

The steamboat Empress of Midland, specially designed and constructed for trade on the Upper Lakes by Swan, Hunter & Wigham Richardson, Wallsend-on-Tyne, Eng., arrived at Montreal after discharging cargo at Halifax en route, Oct. 2, and proceeded through to Midland, Ont., where she has joined the service of the Empress Transportation Co. of Midland. Her dimensions are: length, 260 ft.; breadth, 43 ft.; depth, 28¼ ft.; and tonnage about 3,840. She is equipped with triple expansion engines, extra large boilers, and is constructed with only one deck, but with floor beams for a second deck, so that the change can be made when desirable. There are seven cargo hatches, each 29 by 8 ft., with steam winches, etc.; she has a mean draught of 19 ft., and a coal capacity of 293 tons. In her general lay-out, the vessel is equipped with every modern convenience for the quick handling of cargo, and with ample accommodation for officers.

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM SEPT. 15, 1907, TO OCT. 15.

Name	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Archie	122,512	Vancouver, B.C., 1907	Screw 2 N.H.P.	36.0	10.3	3.6	17	11	Vancouver, B.C.	N. Clark, Vancouver, B.C.
Assiniboia	125,984	Govan, Scotland, 1907	" 298 "	336.5	43.8	23.6	3880	2486	Montreal	C. P. Ry. Co., Montreal
Canpac	122,524	NewWestminster,B.C.,1907	" 9 "	58.8	14.0	8.8	56	38	Vancouver, B.C.	Canadian Pacific Sulphite Pulp Co., Ltd., Vancouver, B.C.
Carolina	122,513	Vancouver, B.C., 1907	" 1 "	31.5	9.5	4.1	13	9	" "	A. Blumel, Vancouver, B.C.
Dola	122,517	" "	" 39 "	96.3	21.8	10.9	176	120	" "	Vancouver Tug and Barge Co., Ltd., Vancouver, B.C.
Edith	122,511	" "	" 13 "	56.9	14.6	6.8	47	32	" "	B. M. Jargenson, Vancouver, B.C.
Grit	122,510	Britannia, B.C., 1906	" 2 "	33.0	11.0	3.8	14	10	" "	M. J. Conlin, Vancouver, B.C.
Gypsy Queen	122,509	Vancouver, B.C., 1907	" 1 "	21.4	6.1	3.1	2	2	" "	W. J. Taafel, Vancouver, B.C.
Hustler	122,516	" "	" 6 "	57.0	14.0	6.4	44	30	" "	N. J. Mayhew, Vancouver, B.C.
Keewatin	125,985	Govan, Scotland, 1907	" 298 "	336.5	43.8	23.6	3856	2470	Montreal	C. P. Ry. Co., Montreal
Mavourneen	122,522	Vancouver, B.C., 1907	" ¼ "	32.4	9.3	3.6	13	9	Vancouver, B.C.	R. J. Quinn, Vancouver, B.C.
Newington	110,697	Hull, Eng., 1899	" 58 "	115.3	21.0	11.5	193	61	" "	A. A. H. Stracey, London, Eng.
Ontario No. 1	125,983	Toronto, 1907	" 292 "	317.0	54.2	18.7	5146	3229	Montreal	Ontario Car Ferry Co., Ltd., Montreal
Premier	122,444	Clifton, N.B., 1907	" 4 "	64.9	21.6	4.7	56	35	St. John, N.B.	Clifton Steamship Co., Ltd., Gondola Point, N.B.
Raoul	122,485	St. Paul's Bay, Que., 1907	" 20 "	67.7	16.0	6.6	43	42	Quebec, Que.	A. H. Simard, St. Paul's Bay, Que.
Rex	122,514	Vancouver, B.C., 1907	" 5 "	38.0	10.0	4.0	14	9	Vancouver, B.C.	P. & J. Newberg, Vancouver, B.C.
Rover	122,518	" "	" 2 "	39.0	11.0	4.8	19	13	" "	A. Wallace and H. B. Babbington, Vancouver, B.C.
St. Joe	122,434	Marksville, Ont., 1907	" 4 "	56.5	14.4	8.0	39	27	Sault Ste. Marie, Ont	R. B. MacCaul, Sault Ste. Marie, Ont.
Skookum I	122,523	Vancouver, B.C., 1904	" 2 "	68.0	26.1	6.2	129	88	Vancouver, B.C.	Vancouver Dredging and Salvage Co., Ltd., Vancouver, B.C.
Unican	122,519	" " 1907	" 3 "	35.7	10.5	5.3	15	10	" "	J. E. Macrae, Vancouver, B.C.
Vina	122,515	" " 1907	" 2 "	36.4	9.0	4.3	12	8	" "	W. Harries, Vancouver, B.C.
Yamato	122,521	Steveston, B.C., 1907	" 3 "	42.0	10.8	4.1	16	11	" "	N. Hamaguchi, Vancouver, B.C.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM SEPT. 15, 1907, TO OCT. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Beatrice	122,185	Queensport, N.S., 1898	Schr.	38.0	10.2	6.1	11	11	Arichat, N.S.	J. C. Ryan, Canso, N.S.
Britannia	122,520	Nanaimo, B.C., 1905	Sloop	34.8	8.9	2.6	7	7	Vancouver, B.C.	F. G. Seaton, Vancouver, B.C.
Bute No. 1	122,384	Vancouver, B.C., 1905	Barge	66.0	24.5	6.3	87	79	Victoria, B.C.	A. Berquist, Sidney, B.C.
Carmacks	122,385	White Horse, Yukon, 1907	"	120.0	38.7	5.5	211	211	" "	The British Yukon Navigation Co., Ltd., Vancouver, B.C.
Evelyn	112,005	Granville, N.S., 1907	Schr.	142.6	30.9	11.5	334	287	Annap. Royal,N.S.	F. W. Pickels, Annapolis Royal, N.S.
Jennie T	122,591	Belleveau Cove, N.S., 1907	"	41.0	16.0	7.6	31	31	St. Andrews, N.B.	J. F. Nesbit & G. B. Thomas, G.Manan, N.B.
Marie C	111,798	Shelburne, N.S., 1907	Sloop	38.0	13.1	6.5	18	18	P. Hawkesbury,N.S	J Munroe, Aulds Cove, N.S., and J. Strachan, Port Mulgrave, N.S.
Nile	122,311	La Have, N.S., 1907	Schr.	57.8	17.0	7.4	38	38	Lunenburg, N.S.	J. S. Wolfe, West Dublin, N.S.
Two Brothers	122,184	Main-a-Dieu, N.S., 1907	"	43.0	13.4	5.5	19	19	Arichat, N.S.	P. Campbell, Main-a-Dieu, N.S.
V.T.B. 3	122,508	Vancouver, B.C., 1907	Scow	86.4	32.1	9.0	223	223	Vancouver, B.C.	Vancouver Tug and Barge Co., Ltd., Vancouver, B.C.

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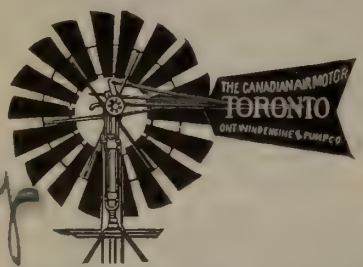

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The Northwest Navigation Co.'s steamboat Idell is in the dry dock at Selkirk, Man., undergoing repairs.

The Dominion Fish Co.'s steamboat Premier arrived at Selkirk, Man., Oct. 9, from Snake Island, and left again for Warren's Landing. This is the last trip of the season from Norway House.

R. Hoersetgen and G. Shark, who left Edmonton, Alta., in June, in the endeavor to reach the Gulf of Mexico in a rowing boat, arrived in Winnipeg, Man., recently. They travelled down the Saskatchewan River to Lake Winnipeg, reaching Winnipeg by the Red River. The party intends to follow the Red River to its source, or as far as possible, make a portage to the head waters of the Mississippi and then descend to the Gulf. The most difficult part of the journey has, it is claimed, been completed.

B.C. and Pacific Coast Marine.

A. Munn, New Westminster, has been appointed a measuring surveyor of shipping for that port.

The C.P.R. steamboat Otter, which struck a rock in the Ladysmith harbor, was recently towed to Victoria for repairs.

London, Eng., press despatches deny the statement that the Imperial authorities intend to re-establish a naval base at Esquimalt.

It is reported that the Wallace Shipyards, Vancouver, B.C., have decided to erect shipbuilding ways having a capacity of 2,500 tons, with machine shops attached.

The Lieut.-Governor of British Columbia has by an Order-in-Council approved of the change of name of the British-American Dredging Co., Ltd., to that of the British Columbia Electric Mining Co., Ltd.

A press report states that a Norwegian company, which at present has two vessels under charter to the Mackenzie Steamship Co. engaged in the B.C.-Alaska trade, will next year establish its own fleet at Vancouver, in a similar service.

The Norwegian steamship Tellus, 2,522 tons gross, bound from Nanaimo, B.C., to Portland, Ore., with coal, went ashore on North Spit, at the entrance to Gray's Harbor, Sept. 21, and broke in two, and with her cargo became a total loss.

The steamship Newington has arrived at Vancouver from Hull, Eng. She is a small 61-ton vessel and was formerly engaged in the North Sea fishing industry. She left Hull June 23, and called at Plymouth, St. Vincent, Montevideo, Coronel, Callao, and San Francisco for coal.

The Watkins Logging and General Contract Co., Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $100,000, amongst other things, to charter, build or otherwise acquire and operate steamboats and other vessels for the purposes of the company.

Press reports state that a new steamship service between Vancouver and Queen Charlotte Islands will be inaugurated shortly, in conjunction with a Japanese mining company. It is stated that the intention is to purchase three steel vessels, and that $140,000 has already been subscribed

The British Columbia Transportation and Commercial Co. has deposited with the Minister of Public Works, Ottawa, and the Registrar-General, Victoria, B.C., plans for a wharf which it is proposed to construct at Telegraph Passage, Skeena River, opposite lot 112, range 5, Coast Division, B.C.

The C.P.R. steamship Tartar collided with the C.P.R. ferry steamboat Charmer, during a fog, between Vancouver and Victoria, Oct. 17. The Charmer reached Vancouver, Oct. 18, with her bow smashed, and the Tartar, which was outward bound, had to be beached on the southern point of English Bay.

Following on the loss of their barge Richard III, which it is alleged was cut loose in Clarence Strait, when in tow between Ketchican and Niblack, Alaska, R. Dunsmuir & Sons have entered action in the U S. District Court, Seattle, Wash., to recover $12,000 damages from the owners of the steamboat Alaskan for negligence.

Alvo von Alvensleben, Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $50,000, to carry on the business of broker and financial agent, and to purchase, build or otherwise acquire and operate steam or other vessels and to carry on the business of general carriers by land and water.

A proposal has been submitted to the Chief Commissioner of Lands and Works, as required under the Rivers and Streams Acts of British Columbia, by C. D. Emmons, Eugene, Ore., U.S.; V. Vigelius, Ketchikan, Alaska; and B. H. John, Victoria, B.C., to clear and remove obstructions from the Yakoun River, Queen Charlotte Island, and the mouth of the same river.

The B.C. Boat and Engine Co., Ltd., has been incorporated at Victoria, under the British Columbia Companies Act, with a capital of $10,000, to purchase, charter, build or otherwise acquire, steamers, tug boats, launches, lighters, barges, and other vessels, or any share or shares therein, to manage, sell or hire any vessel of the company, and to acquire—warehouses, wharves and other buildings necessary for the objects of the company.

W. J. Stewart, hydrographic surveyor of the Dominion Department of Marine, has returned to Ottawa, after an inspection of the Prince Rupert harbor, at the G.T. Pacific Ry., western terminus. He states that the largest steamships at present in use could pass right into the harbor without difficulty or danger even at night. The Government has spent about $100,000 in surveying the harbor, building a lighthouse and placing buoys.

The Canadian-Mexican Development Co., Ltd., has been incorporated under the Revised Statutes of Canada, with a capital of $1 000,000, and offices at Victoria, B.C., amongst other things to construct, operate, hire and dispose of all kinds of steam and sailing vessels, boats, barges, etc., also wharves, docks and elevators, and generally to carry on the business of an elevator, navigation and transport company; to construct and operate tramways, telegraph and telephone lines for the purposes of the company. The provisional directors are: J. S. Lovell, W. Bain, R. Gowans, E. W. McNeill, H. Chambers, J. S. Bisgrove, R. M. Coates, Toronto.

A company has been registered at Victoria, under the British Columbia Companies Act, with the name of the Adams River Improvement Co., Ltd., with a capital of $50,000. The objects of the company are, to improve the navigation of the Upper Adams River from its source to the head of Adams Lake, and to improve the navigation of the Lower Adams River from the foot of Adams Lake to Shuswap Lake, by blasting and removing all natural obstructions, and to build dams, chutes and other works for driving and sorting logs and timber; to avail itself of all rights and immunities conferred by the Rivers and Streams Act, relating to the improvement of lakes and rivers, and to collect tolls, from such persons using the works of the company.

The Western Transport Co., Ltd., has been incorporated at Victoria under the British Columbia Companies Act, with a capital of $10,000, to purchase or otherwise acquire the steamship Alert and the barge Rainbow, and to employ same in the conveyance of passengers and merchandise; to purchase, hire or build other vessels, to carry on the business of carriers by water, shipowners, etc. The Alert, register number 94,807, was built at Victoria in 1889; dimensions: length, 62 ft.; breadth, 15.4 ft.; depth, 6.5 ft.; tonnage, 44 gross, 26 registered, and has an engine of 80 h.p. The barge Rainbow, register number 116,936, was built in Victoria 1905, dimensions: length, 70 ft.; breadth, 26.3 ft.; depth, 3.4 ft.; tonnage 54 registered. Both vessels are entered in the names of C. G. Stromgren, Nanaimo, and A. A. Sears, Victoria, as joint owners.

The following companies have been licensed under the British Columbia Companies Act regarding extra-provincial companies, to carry on their businesses within the Province of British Columbia, included in which are, powers to construct and operate canals, waterways, railways, and telegraph and telephone lines: T. J. How Land Co., Ltd.,

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals in September:

Articles.			Canadian Canal	U.S. Canal	Total
Copper	Eastbound	Net tons	2,376	7,816	10,192
Grain	"	Bushels	1,741,115	627,688	2,368,803
Building stone	"	Net tons	....	428	428
Flour	"	Barrels	539,065	293,305	832,370
Iron ore	"	Net tons	1,728,105	4,669,678	6,397,783
Iron, pig	"	"	1,528	....	1,528
Lumber	"	M. ft. B.M.	5,785	84,094	89,879
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	5,223,300	2,499,520	7,722,820
General merchandise	"	Net tons	6,849	8,459	15,308
Passengers	"	Number	2,507	1,736	4,243
Coal, hard	Westbound	Net tons	35,950	162,916	198,866
Coal, soft	"	"	348,488	875,679	1,224,167
Flour	"	Barrels	....	250	250
Grain	"	Bushels	295	1,563	1,858
Manufactured iron	"	Net tons	17,941	23,174	41,115
Salt	"	Barrels	8,000	53,100	61,100
General merchandise	"	Net tons	48,738	57,648	106,386
Passengers	"	Number	1,802	2,442	4,244
Freight—Eastbound		Net tons	2,002,380	4,950,629	6,953,009
" Westbound		"	452,265	1,127,432	1,579,697
Total freight		"	2,454,645	6,078,061	8,532,706
Vessel passages		Number	893	2,029	2,922
Registered tonnage		Net	1,794,629	4,691,504	6,486,133

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Rouleau, Sask., with a capital of $100,000, offices at Kelowna, B.C., and S. R. Johnston as attorney; Canadian-American Timber Co., Ltd., Seattle, Wash., with a capital of $30,000, offices at Vancouver, B.C., and F. C. Raney as attorney; Gas Investment Co., Ltd. Threadneedle House, 28-31 Bishopsgate St., Within, London, Eng., with a capital of £25,000, offices at Vancouver, B.C., and R. K. Honegate as attorney; Red Cliff Land and Lumber Co., Ltd., of Superior, Wis., U.S., with a capital of $400,000, offices at Victoria, B.C. and H. D. Helmcken as attorney.

The following companies have been incorporated at Victoria, under the British Columbia Companies Act, with power, among other things, to acquire, construct and operate, canals, lakes, waterways, docks, wharves, piers, warehouses, barges, dredges, tugs, steam and other vessels, railways, tramways, and other mechanical means of transportation, also to equip and operate telegraph and telephone systems in connection with their businesses:

	Capital.
Namarata Development Co., Ltd..... $	100,000
Harrison Hot Springs Co., Ltd.....	250,000
North American Shingle Co., Ltd.....	25,000
Snowy Top Mining Co., Ltd.....	20,000
Squamish River Boom Co., Ltd.....	10,000
Imperial Rink and Amusement Co., Ltd.	30,000
Barclay Sound Packing Co., Ltd.....	10,000
Nicola Valley Lumber Co., Ltd.....	50,000
Scott Cove Timber Co., Ltd.....	50,000
Shuswap Lumber Co., Ltd.....	50,000
Nicola Valley Lumber Co., Ltd.....	50,000
Kelowna Tobacco Leaf Co., Ltd.....	50,000
Duncans Power and Development Co., Ltd.	50,000
Norman Plass Lumber Co., Ltd.....	250,000
Howard Cole Timber Investment Co.,Ltd.	50,000
The Alberni Mills and Timber Co., Ltd...	250,000

The Dominion Marine Department has published in book form a report on the currents in the straits of Belle Isle from investigations of the Tidal and Current Survey in 1894 and 1906 by W. Bell Dawson, Engineer in charge.

At the second annual convention of the Lakes to the Gulf Waterways Association, at Memphis, Tenn., Oct. 5, a resolution was adopted calling upon Congress to authorize work to be commenced for a 14 ft. channel from the Great Lakes to the Gulf of Mexico.

A reprint from the Royal Astronomical Society's Journal, on the variation in the leading features of the tide in different regions, by Dr. W. Bell Dawson, has been published in pamphlet form; it contains considerable information of use to navigators of both oceans.

Tenders were received Oct. 14 by the P.E.I. Public Works Dept., for the running of a steamship of 200 tons register, capable of carrying 250 passengers, and of maintaining a speed of not less than 12 knots an hour, from Charlottetown to Crapaud, twice a week; to Orwell, to East River, and to West River, once a week, for a period of five or ten years from the opening of navigation 1908.

Notices to Mariners.

No. 81. Aug. 27.—217. River St. Lawrence, Montreal harbor, Ile Ronde, range lights established.

No. 82. Aug. 29.—Newfoundland—218. East coast, Wadham islands, banks southward and eastward of. Quebec — 219. Saguenay river, Poste St. Martin, new range lighthouses.

No. 83. Sept. 5.—Quebec—220. River St. Lawrence, off Grand Pointe, gas buoy established. 221. River St. Lawrence, north channel, eastern narrows of north traverse, gas buoy established, change in numbering of north channel buoys. 222. River St. Lawrence, ship channel between Quebec and Montreal, Lake St. Peter, west end, lightship, correction to list of lights. Scotland—223. West coast, Hebrides, Glass island, fog signal to be established.

No. 84. Sept. 6.—Quebec—224. Gulf of St. Lawrence, northern shore, Rocky Bay, rock in approach. Newfoundland — 225. North end, Cape Bauld, new fog alarm. 226. East coast, Fogo district, Stag harbor run, buoys established. 227. South coast, Trepassey bay, Powles head, change in fog signal. 228. South coast, Placentia bay, off entrance to Burin, Iron island, light established.

No. 85. Sept. 7.—British Columbia—229. Vancouver island, west coast, Barkley sound, off Hand island, uncharted rocks. 230. Juan de Fuca strait approach, Swiftsure bank, gas, whistling and bell buoy established. Alaska—231. Norton sound, St. Michael bay, Whale island, light established.

No. 86. British Columbia—232. Strait of Georgia, Burrard inlet, Spanish bank, bell buoy established. 233. Fitzhugh sound, Rivers inlet, Zero rock, gas-lighted beacon established. 234. Fitzhugh sound, Fisher channel, Fog rocks, gas-lighted beacon established.

No. 87. Sept. 12.—Newfoundland—235. Southeast coast, Cape Race, new lighthouse, change in character of light.

No. 88. Sept. 13.—Quebec—236. Gulf of St. Lawrence, Fame point, new lighthouse, change in character of light. Newfoundland—237. North coast, Strait of Belle Isle, Cape Norman, color of lighthouse.

No. 89. Sept. 18.—Ontario—238. Georgian Bay, Parry Sound approach, Spruce shoal, lighthouse foundation placed, temporary light exhibited. 239. Georgian Bay, Lonely island, lighthouse rebuilt.

No. 90. Sept. 18.—Nova Scotia—240. Bay of Fundy, Lurcher shoal, lightship to be removed from her station temporarily for repairs.

No. 91. Sept. 23—Newfoundland—241. Southwest coast, Cape Ray, new iron lantern, intended change in character of light.

No. 92. Sept. 24—New Brunswick—242. South coast, Bay of Fundy, St. John harbor entrance, water pipe laid between Negro point and Partridge island, caution. 243. East coast, Strait of Northumberland, Cocagne, range lights established.

No. 93. Sept. 25. Quebec—244. Saguenay River, Anse St. Jean, change in color of light. 245. Saguenay River, Ha-ha Bay, St. Alphonse, change in color of light. 246. River St. Lawrence, below Quebec, St. Simeon, Ste. Irenee and Les Eboulements, hand foghorns at light stations. 247. River St. Lawrence, ship channel between Quebec and Montreal, Ile aux Foins, gas buoy established. 248. River St. Lawrence, Montreal harbor, gas buoys established.

No. 95. Sept. 30. Ontario—250. River St. Lawrence, north channel dyke, gas-lighted beacon established at west end. 251. Lake Ontario, Presqu'ile point, fog alarm established. 252. Lake Erie, mouth of Detroit river, sunken wreck. 253. Lake Huron, north channel, Manitoulin island, Little Current range lights, correction.

No. 96. Oct. 3. Quebec—254. River St. Lawrence, Matane, new lighthouse, change in character of light.

No. 97. Oct. 3. Quebec—249. River St. Lawrenec, ship channel between Quebec and Montreal, Gentilly, range lights established.

The following have been issued by the U.S. Hydrographic Department:

No. 39. Sept. 28.—Detroit river—1739. Limekiln crossing, east channel, float lights, and buoys established.

No. 40. Oct. 5.—1801. Lake Huron, St. Clair river, shoal removed. 1802. Lake St. Clair, St. Clair river, wreck removed. 1803. Detroit river, Rouge river, dredged channel. 1804. Detroit river, rules and regulations. 1805. Lake Erie, Colchester reef, wrecks. 1806. Lake Erie, Pelee island, wreck to northward, further information.

No. 41. Oct. 12—1852. St. Mary's river, Little Mud lake, buoy moved. 1853. Detroit river, Windmill point range light station, change in lights.

The Cassandra-John Lambert Enquiry.

A formal investigation was held at Montreal September 12, before Commander O. G. V. Spain, Dominion Wreck Commissioner, assisted by Capt. J. Riley, assessor, into a complaint made by Capt. J. Mitchell, of the Donaldson Line S.S. Cassandra, against the captain of the S.S. John Lambert, of Duluth, U.S., for having nearly caused a collision, by improper navigation of the said steamship John Lambert, in the harbor of Montreal. The following judgment was delivered:

It appears from the evidence adduced that the steamship John Lambert was berthed on the up-stream side of the Alexandra pier, Montreal, at 11.20 p.m., May 23; at about 7.00 in the morning of May 24, she left this berth, in order to go into the basin, inside of the Victoria pier, where, according to the evidence, she was to unload into the S.S. Nordstjernen; the John Lambert was moored at the Alexandra pier, with her bow towards the city, and the captain, in his evidence, says that, as she was being swung round in the basin, above the said pier, in order to enable him to head down-stream, the Cassandra was noticed coming out of Windmill Point basin, manœuvring, in order to turn, and go downstream also. It is very clear, from the evidence, that both ships were, therefore, proceeding down the river, the John Lambert being some short distance ahead of the Cassandra, and on her port bow, the vessels proceeding at a moderate rate of speed. The master of the Cassandra gave one short blast with his whistle, and ported his helm, in order to enable him to take up his proper position, on the starboard side of the channel. The evidence of the crew

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THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

of the John Lambert, at this point; was, that they had not heard this first blast, given by the Cassandra; however, whether this signal from the Cassandra was heard or not by the John Lambert, the master of the latter vessel gave two short blasts with his whistle, signifying to the vessel astern according to Article 28 of the Act respecting the navigation of Canadian waters, that he was directing his course to port, but, instead of carrying out the manœuvre, as indicated by his signal, he did exactly the opposite, that is to say, he ported his helm, going to starboard, and running directly across the bows of the Cassandra. The evidence, at this point, in regard to the distance the two vessels were apart, is very conflicting, the evidence of three of the witnesses for the John Lambert contradicting the evidence of seven of the witnesses for the Cassandra, the John Lambert's witnesses saying that the vessels were so far apart that, at no time, was there danger of collision. The court, however, attaches great importance to a disinterested witness, that is to say, the master of the tug Lucia, who says that he was ahead of the Cassandra, and connected with her by one hundred and fifty feet of a tow line, and that he had to let go his tow line, as otherwise, if he had not done so, the Lucia would have struck the John Lambert.

The master of the Cassandra immediately took prompt action to avert what he considered would be a collision with the John Lambert. He reversed his engines, let go both anchors, and sounded three blasts of his whistle, to signify that he was going full speed astern. The court considers that, by this action, a collision was averted, and the John Lambert passed safely across the Cassandra's bows, proceeding up-stream, and into her berth.

The master of the Cassandra had no intimation of the intention of the John Lambert to deviate from the course he was pursuing down stream, and, when he was misled by the signal of this vessel, a collision was imminent, and he took every means to prevent it.

The master of the John Lambert does not offer any valid reason for his serious and dangerous breach of the rules of navigation, and his excuse, that he thought the rules of navigation on the Great Lakes applied to the harbor of Montreal, does not exonerate him in any way, as the rules of the road for the Great Lakes, sec. b, art. 28, distinctly state that two short blasts mean "I am directing my course to port."

The court is, therefore, of the opinion that the master of the John Lambert was in grievous fault, and that a serious disaster might have occurred, owing to his action, and would have occurred, if it had not been for the prompt means which the master of the Cassandra took to avert it.

The court desires to bring to the notice of the authorities that D. T. Sullivan, of Duluth, Minn., master of the steamship John Lambert, holds a U.S. license as master of steam vessels for the Great Lakes, and tributaries, and as first-class pilot, between Chicago and Duluth, which bears an endorsement, extending the license to the St. Lawrence river as far east as Ogdensburg; therefore, this vessel, not having a branch pilot on board, was absolutely without an officer of any sort whose certificate or license would entitle her to navigate the waters where the casualty nearly occurred, the mate's license reading only as far east as Ogdensburg also. This, the court considers a very serious matter, and it is not an isolated instance, as in most cases which have been brought to the attention of the court, U.S. vessels of this description, navigating Canadian waters east of Ogdensburg, are in the same category.

In addition to the above, the court is of the opinion that the John Lambert was liable for compulsory payment of pilotage, and in moving without a pilot, contravened one of the Harbor Commissioners' by-laws, which makes it compulsory on all vessels to pay dues, for the services of a branch pilot, when moving into, or out of, the harbor of Montreal.

The master of the John Lambert, holding a U.S. license, is outside the jurisdiction of this court, even if his license were good east of Ogdensburg; and the court suggests, in this case, that some action should be instituted against the master of the John Lambert, under sec. 924, chap. 113, of an Act intituled "An Act respecting shipping in Canada."

Among the Express Companies.

A. Sharpe, heretofore in the money department, Dominion Ex. Co., has been transferred to the customs department in place of J B. Sutherland.

D. Stephens has been appointed day depot agent for the Dominion Ex. Co., at London, Ont., and is succeeded as night depot agent by John Patterson.

J. B. Sutherland, heretofore customs clerk Dominion Ex. Co., Toronto, has been appointed agent of the foreign department for Ontario, a new position just established.

The Canadian Ex. Co. as one of the departments of its business undertakes the carrying of thoroughbred horses from place to place for show purposes or race meetings. For this work the G.T.R. has just completed the construction of 10 new horse cars. They are each 60 ft. in length, equipped with patent buffers, high speed air brakes, steam heating apparatus, and are mounted on regulation passenger trucks. Sixteen horses can be carried on each car, together with the necessary fodder, and the attendants with their baggage.

An action by the Dominion Ex. Co. against the Town of Niagara was tried at Toronto, Sept. 25, and judgment entered for the plaintiffs, with costs. The action was for a declaration that the business assessments attempted to be made against the plaintiffs for the years 1905 and 1906 are void and illegal, and for an injunction restraining defendants from levying or otherwise seeking to collect taxes claimed by them in respect of such business assessments. An agreement was on foot before 1905 between plaintiffs and the Niagara Navigation Co. whereby the agent of the latter at Niagara acted during the navigation season as the agent of the plaintiffs, each paying one-half of his salary from May to November. During the remaining months of the year he was paid by the Navigation Co., and his clerk was paid in the same proportion, except that he was not in the employ of the Navigation Co. when the boats were not running. Goods to be carried by express were received at Niagara by the agent acting for plaintiffs, who used part of the office of the Navigation Co. The great bulk of the goods consisted of fresh fruit in transit from Niagara to Toronto. Under 4 Ed. VII, ch. 23, sec. 10, an express company carrying on business in connection with steamboats and occupying or using land may be assessed for a sum to be called "Business Assessment" where "such land is occupied or used mainly for the purpose of its business." The plaintiffs were assessed under this head at $1,800 for 1905 and 1906. Judge Maybee held that it is clear from the evidence, the use of the wharf and premises of the Niagara Navigation Co. at Niagara during the season is mainly for the purpose of the business of the Navigation Co. and not for the business of the plaintiffs

Telegraph and Cable Matters.

A. P. Darrell, of the Bermuda Cable office, Halifax, N.S., has been transferred to the company's office at Kingston, Jamaica.

Considerable damage was done to telegraph and telephone wires throughout Nova Scotia Oct. 8, by a storm which broke over the province.

The steamship Chippewa on the route between Victoria, B.C., and Seattle, Wash., is to be equipped with apparatus for wireless telegraphy.

Application is being made to the Governor-in-Council, Nfld., for letters patent for improvements in transmitters for wireless telegraphy, by Guglielmo Marconi.

It is reported that the Dominion Government will probably erect a wireless telegraph station at Port Essington, B.C., as a part of its system along the Skeena River.

A committee of the C.N.R. telegraph operators has been formed to lay the question of an increase in wages before C.W. Spencer, General Manager of the company's Eastern Lines.

At recent meetings of the G.T.R. telegraphers, a memorial was prepared asking for an increase of 20% in wages, and the abolition of the present system of deducting amounts from pay for the superannuation fund.

A press dispatch from London, Eng., dated Oct. 24, states that the Marconi Wireless Telegraph Co. is considering the question of erecting its own land lines in Canada to avoid the delay at present existing in the transmission of messages.

The Dominion Government cable steamer Tyrian has raised the 3¼ miles of cable connection with Anticosti Island. The stations on the island will connect with the mainland by the Marconi wireless telegraph station. The cable raised is being sent to Victoria, B.C., for use there.

A special telegraph line has been completed recently, and is now in operation, between Montreal and New York, to facilitate the transmission of messages between Canada and Havana by the submarine cable between New York and Havana, which was opened for business Oct. 15.

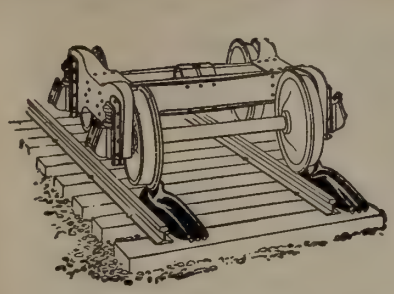
The Yale-Kootenay Telegraph Co., which is the title under which the Spokane Falls and Northern Ry. System, a subsidiary of the Great Northern Ry., U.S., carries on business in British Columbia, has re-elected its retiring directors. W. H. Fortier, secretary and auditor of the S.F. and N. Ry., is secretary of the telegraph company.

The C.P.R. Telegraph Department has opened offices at Colley, Hardesty, Killam, Pincher Creek and Sedgewick, Alta.; Nicola, B.C.; Bradwardine, Ebor, Man.; Auburn, Bala, Beaucage, Blyth, Coldwater, Credit Forks, Canickle, Eady, Glencoe, Hobart, James Bay Jct., McGaw, Midhurst, Walton, Weissenburg, West Moncton, Ont.; Conception, Shawinigan Falls, Que.

The telegraph operators employed on the G.T.R. and the C.N.R., it is stated, recently prepared a statement of their claims for increased pay, etc., on the basis granted to the C.P.R. telegraphers, and laid it before their respective employers for consideration. W. G. Brownlee for the G.T.R. has declined the request for advance. The C.N.R. operators who had stated they would resign have withdrawn the threat.

At the recent annual general meeting of the Great North-Western Telegraph Co., the following officers and directors were re-elected for the current year: President, H. P. Dwight; Vice-President, A. Brown; Vice-President and General Manager, I. McMichael; Directors, J. Hedley, W. C. Mathews, H. N. Baird, Hon. J. K. Kerr, Toronto; Col. R. C. Clowry, J. B. Van Every, New York; Sec.-Treasurer, G. D. Perry; Auditor, A. C. McConnell.

Notice was served on the Dominion Deforest Wireless Telegraph Co. that a wind-



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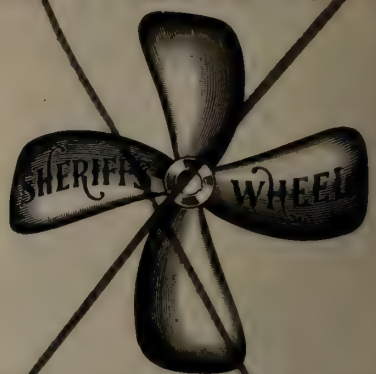

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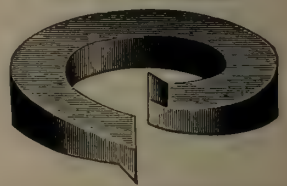

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ing-up order would be asked for in the Superior Court, by F. W. Humphrey, formerly president of the company, who secured judgment against it some time ago for $35,513. A meeting of shareholders has been called to consider the financial position. An order for the winding up of the company was made Oct. 25. The company was incorporated Feb. 28, 1905, with a capital of $1,200,000, with headquarters at Montreal. A station was erected some months ago at Toronto Junction, but was subsequently closed.

F. G. Cross, connected with the Marconi Wireless Telegraph Co., was a passenger on the S.S. Moana, sailing from Vancouver, B.C., Oct. 16. It is said that he is on his way to the Fiji Islands to erect a wireless telegraph station there to form a link in a girdle round the world. The route from Great Britain is mapped out as follows: from the present station at Clifden, Ireland, to Glace Bay, N.S.; thence across Canada to Fanning Islands, Fiji and Australia, on to British Borneo, Hong Kong, Ceylon, South Africa, and to Great Britain again via St. Helena, or Aden, Cyprus, Malta and Gibraltar.

We are advised that the rates for Marconi wireless messages between ships and shore stations, from Oct. 1, are as follows: Quebec, Grosse Isle and Father Point, 50c. for 10 words, and 3c. each additional word; Clarke City, Fame Point, Heath Point, Whittle Rocks, Point Rich, Point Amour, Belle Isle, Cape Ray and North Sydney, $1.00 and 6c.; and Cape Race, $3.00 and 18c.; Sable Island and Cape Sable, $4.00 and 24c.; and Halifax and St. John, $2.00 and 12c. It has been stated that the rates to Clifden, Ireland, are 10c. a word, with 5c. a word for press messages, land charges at either end being additional.

The Board of Conciliation recently appointed to investigate the differences between the C.P.R. telegraph operators and their employers has issued its award, and in conjunction with the officials of both sides has reached an agreement which is mutually satisfactory. An advance of wages is conceded the operators of 14%, together with overtime allowance for Sunday work, and they are also granted holidays without stoppage of pay. The hours of labor are not reduced, but compensation for that is to be made in salary. The board suggests that operators be not compelled to instruct students in telegraphy, and that provision be made for their protection during inclement weather when accidents have occurred. The agreement is signed by the members of the Board of Conciliation, by D. McNicoll, Vice-President and General Manager C.P.R., and D. Campbell and E. Goulet, Executive officers of the Order of Railway Telegraphers.

Notices were recently issued advising an increase in rates to be charged for press messages over the C.P.R. telegraph lines in Manitoba, Alberta, Saskatchewan, and British Columbia. Press reports stated that in an interview on the subject, Sir Thos. G. Shaughnessy, President C.P.R., had said that he was entirely ignorant of such a notice. A meeting of owners and editors of daily papers in the four provinces was held at Regina, Sask., Oct. 10, and a telegram dispatched to the Dominion Premier, bringing the matter to his notice and requesting a remedy. The Premier wired in response that he had communicated with the head officials of the C.P.R., who assured him that they had no previous knowledge of the affair, but would take immediate steps to adjust any differences which may have arisen between the press and the telegraph department. On Oct. 11 the C.P.R. telegraph department notified the newspapers affected that all the conditions which governed the transmission of messages prior to Aug. 1, would take effect at once.

The Marconi Wireless Telegraph.

The station erected at Port Morien, Glace Bay, N.S., by the Marconi Wireless Telegraph Co., for the purpose of transmitting and receiving wireless messages across the Atlantic, in conjunction with a similar station at Clifden, Ireland, was opened Oct. 17, and the system inaugurated as a commercial practicability. There was no formal opening, and although a number of press representatives were at the station, neither the interior arrangements nor the methods of transmitting and receiving were open to their inspection. Messages from Earl Grey and Sir Wilfrid Laurier were despatched in the course of the day to the King, to which His Majesty responded on the following day. A message was also received in Toronto from Lord Strathcona, which is said to be the first paid message by this system. Marconi's first experiments in wireless telegraphy took place on his father's estate in Bologna, where he succeeded in transmitting electrical waves a distance of two miles. In 1895 he went to England, where he interested Sir W. H. Preece, Government Telegraph Engineer, in his proposals, aad subsequently demonstrated the utility of his system by sending messages across the Bristol Channel between Penarth and Weston-super-Mare. This was followed up by communications across the English Channel with France; between a point in Dorsetshire and a station erected at Poldhu, Cornwall, a distance of 152 miles, 109 being over sea and 43 over land; and between the station at Poldhu and St. Catharines, Isle of Wight, a distance of 183 miles. The success attending these experiments encouraged him to attempt the transmission of messages across the Atlantic, and more powerful machinery than had hitherto been used was installed at Poldhu. In 1901 a temporary receiving station, consisting of a vertical wire 400 ft. long suspended from a kite, and connected with a detector, was arranged at Signal Hill, near St. John's, Nfld. The distance between the two stations was about 2,200 miles. The signal, previously arranged, was transmitted from Poldhu and received at regular intervals, but no regular message passed at the time. In 1902, further experiments were made between Poldhu and the S.S. Philadelphia, equipped for the purpose, en route to New York, and reports in connection with this show that readable messages were received at a distance of 1,551 miles from Poldhu, and indications were received as far as 2,099 miles distant. Later, in 1902, at the invitation of the Italian Government, Marconi conducted experiments from the warship Carlo Alberto, and messages were transmitted overland to near Kronstadt, Russia, 1,400 miles; at Gibraltar, across Spain, about 1,000 miles, and across France, also about 1,000 miles, over the Alps. The vessel was placed at Marconi's service by the Italian Government, to assist him to establish a similar communication between England and Canada. On Oct. 20, 1902, Marconi sailed from England for Sydney, N.S., and maintained communication with the Poldhu station during the whole voyage, a distance of 2,500 miles. After some work had been done at Glace Bay, several messages of congratulation passed between the Kings of England and Italy, and Marconi. Another station was later erected at South Wellsfleet, Mass., and in Jan., 1903, messages were exchanged between King Edward and President Roosevelt. Having demonstrated beyond question the utility of the system, and the commercial advantages to be gained from its use, Marconi devoted himself to the work of perfecting the apparatus, and of overcoming several difficulties which had shown themselves during the lengthy series of experiments he had conducted. During the five years which have intervened, much work has been done in regard to the trans-Atlantic system, of which the public knows nothing, but the company's energy has not been confined to that alone. Many vessels and shore stations have been equipped in Canada, on both coasts, and a contract has been made between the company and the Government regarding the erection and equipment of stations in the Dominion, about which there is a dispute at the present time.

The station at Port Morien, consists of four wooden towers, each 250 ft. high, surmounted by a mast 35 ft. high, making a total height of 285 ft. At regular distances there is a series of 24 masts (eight of which only are used) each 180 ft. high, for the purpose of holding up the aerials, comprising 51 wires. The condensing houses, consisting of two buildings 200 ft. by 60 ft. by 33 ft. high, erected in the form of a T, are placed in the center of the four towers, and there the wires from the towers converge. The power houses and workshops are situated near by, and a considerable staff is engaged in the manufacture of the apparatus.

The apparatus consists of an oscillator and a vertical wire for transmitting, and a magnetic detector, relay, tapper and vertical wire for receiving. The oscillator, in addition to the ordinary induction coil, consists of two metal balls, about one inch diameter. These balls and the spark-gap are immersed in oil to secure a sharper break and a more efficient spark. The actual transmission of the messages is effected by a key similar to, but larger than, the one employed in ordinary telegraphy. This is rendered necessary by the heavy currents and high pressure used in the oscillator circuits. The key has front and back contacts insulated from each other, the front contacts are shunted by the condenser, and the lower contact is in an earthed metal cup, by which device high potential charges are diverted from the key. When the key is closed the vibrator is put into operation, with the result that oscillations are set up in the aerial wire circuit and electric waves are emitted. The opening of the key causes a cessation of the oscillations, and in this manner the duration of the waves or oscillations is regulated so as to correspond to the dots and dashes of the Morse code. The sensitive relay is in a local shunt circuit with the detector and one cell of the battery. The armature lever of the relay controls the local circuit of the tapper, and also of the ink recorder. While oscillations are being received, the tapper keeps up a hum, which stops when the oscillations cease, and the Morse inker is actuated, and the dot and dash impressed on the paper strip, which is started and stopped automatically by the device customarily used in the ordinary telegraph instrument. The general means by which long distance communication has been accomplished are, increased electrical energy at the transmitting end, and more sensitive apparatus at the receiving end, together with high towers, or masts, and a multiplicity of aerial wires. Details of the power used and of other matters at the station, are not obtainable, but the machinery used must be much more powerful than that employed at the earlier stations. At Poldhu, a 20-kilowatt generator, developing 200 volts, was used. This voltage was raised by step-up transformers to about 100,000 volts on the aerial wires. It is understood that the Continental Morse (officially termed the Universal) code will be used. A difficulty has been experienced in receiving and transmitting at the same time, but it is promised that this will be overcome shortly.

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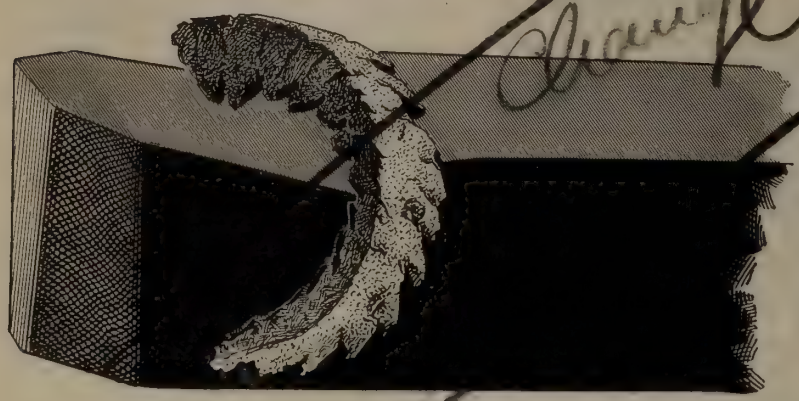

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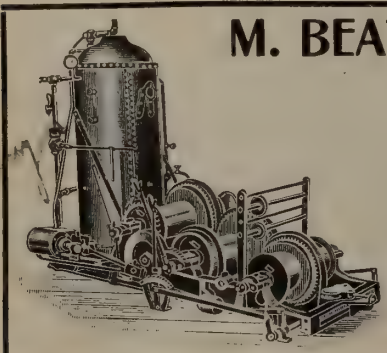

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General Telephone Matters.

A telephone company is being organized at Creston, B.C.

The Saskatchewan Telephone Co. has installed a telephone exchange in Rouleau, Sask.

The construction of a telephone line between Toledo and Smith's Falls, Ont., is in progress.

The Innerkip Rural Telephone Association has installed eleven telephones at Bright, Ont.

The Bell Telephone Co. has extended its long distance connections from Glencoe to Kilmartin, Ont.

The Nova Scotia Telephone Co. has extended its line from Lakeville to Somerset, via Grafton, N.S.

It has been suggested that the T. & N.O. Ry. should purchase the Temiskaming Telephone Co.'s property.

A movement is on foot at Sheho, Sask., to inaugurate a telephone system to connect with Yorkton and Theodore.

It is reported that a large factory is to be erected shortly in Toronto for the manufacture of telephone supplies.

It is reported that the Alberta South-Eastern Telephone Co. contemplates an extension of its line to Havre, Mont.

A new telephone system on the automatic principle is expected to be in operation at Lindsay, Ont., early next year.

The Prairie Farmers Telephone Co., Ltd., has been registered under the Northwest Territories Ordinance, with offices at Claresholm, Alta.

The ratepayers of St. Felicien, Que., have decided to take a vote on a by-law relating to the establishment of a municipal telephone system.

The Farmers' Mutual Telephone Co. No. 1, Ltd., has been incorporated under the Northwest Territories Ordinance, with offices at Milestone, Sask.

The Mott-Boulton Lumber Co., Ltd., Vancouver, has been incorporated for the purpose of preparing and dealing in telegraph and telephone poles, etc.

The Victoria Telephone Co. is being formed at Burnt River, Ont., for the purpose of constructing a telephone line between Burnt River and Fenelon Falls.

An estimate to the Victoria, B.C., City Council has placed the cost of putting the electric light and telephone wires underground approximately at $17,000 a mile.

The Bell Memorial Fund is approaching $40,000. Amongst recent contributors are the City of Toronto, $500; and the Canadian Machine Telephone Co., Ltd., Toronto, $100.

The Bell Telephone Co. has practically completed the installation of new switchboards of the common battery type at its exchanges in Regina, Sask., and Calgary, Alta.

The Winnipeg Board of Control instructed a sub-committee, at a meeting held Oct. 8, to prepare an agreement to cover the erection and use of poles for the Government telephone system.

A co-operative rural telephone system has been established at Merivale, Ont., supplying about a dozen farmers, each paying $20 a year. Connection is given with the Bell Co. at Ottawa.

The Northwestern Telephone Co., formerly the Saskatchewan Telephone and Electric Supply Co., Ltd., is making preparations for an extended service throughout the province.

A resolution was passed recently by the Nelson, B.C., Board of Trade, requesting the municipal authorities in the vicinity to construct a series of long distance telephone lines.

By the end of the year, it is estimated that the Alberta Government will have erected about 500 miles of lines, and installed about fifteen exchanges in connection with its telephone system.

In regard to the proposed telephone system to be put in at Acton, Ont., connections will probably be made with Limehouse, Silver Creek, Ballinaford, Ospringe, Crewson's Corners, Knatchbull, and Speyside.

R. de la Sablienne and H. Moreau, of Paris, France, visited Peterborough, Ont., recently, for the purpose of inspecting the automatic telephone system installed there, with a view to the adoption of the system in France.

It is stated that the policy hitherto pursued by the Bell Telephone Co., in declining to place its instruments on the open market, is to be changed, and that in the future the company will be prepared to sell to any buyers.

A company has been organized under the name of the Dominion Telephone Mfg. Co., Ltd., with a capital of $250,000, for the purpose of manufacturing telephone instruments and accessories, for the use of independent companies.

The work of installing the new automatic telephone system at Brantford, Ont., is being proceeded with. The conduits are being laid, and poles erected, and the fireproof exchange building, 72 ft. by 35 ft., two storeys high, has been commenced.

The Chilliwack Telephone Co. has been granted a franchise by the town of Chilliwack, B.C., to erect poles along its highways. The company expect to instal about 300 instruments, at $1 and $2 a month, for residences and businesses respectively.

Press reports state that several of the independent telephone systems in operation in Ontario have been looked over on behalf of the Independent Telephone Co. of the U.S., with a view to purchase, and that negotiations are in progress and will shortly be concluded.

The enquiry, conducted by F. Dagger, the telephone expert engaged by the Saskatchewan Government to investigate and report as to the desirability of establishing a Government telephone system, has been completed, and his report will be presented in due course.

Hon. W. H. Cushing, Minister of Public Works for Alberta, who was in Toronto recently, also visited Peterborough, Ont., for the purpose of inspecting the working of the machine telephone system installed there, with a possible view to its adoption by his Government

The council of the Montreal Board of Trade has passed a resolution favoring the placing of all electric wires in the city in conduits, and asking the city council to take such action as would compel proprietors on those streets already provided with conduits to make the necessary connections.

The C.P.R. has equipped its telegraph wires between Regina and Moose Jaw, Sask., and Macleod and Calgary, Alta., to enable them to be used for telephonic communication. It is also putting in a telephone line on the track between Fort William, Ont., Brandon and Winnipeg, Man.

The telephone line between Leduc and Edmonton has been taken over by the Alberta Government, and will be thoroughly overhauled. The prices for telephones for business purposes will be $24, and for private residences $15, and it is expected that these will be reduced as soon as the revenue permits.

By supplementary letters patent, the capital of La Compagnie Co-operative Telephonique du Comte Lac Saint Jean et Chicoutimi (Quebec) has been increased to $100,000, and additional powers have been granted to the company as regards the supply of electricity, etc., in the counties of Chicoutimi, Lake St. John and Saguenay.

The Nova Scotia Telephone Co. has completed the purchase of the stock of the Central Telephone Co., which built and operated the line between Bridgewater and Middleton. The plant consisted of 70 miles of poles and 90 miles of wires. It is understood that the line will be thoroughly overhauled, new poles being put in, and a metal circuit adopted.

Officers have been elected for the recently incorporated Princeton and Drumbo Rural Telephone Co., as follows: President, F. J. Daniel; Vice-President, T. Convay; Secretary, G. S. Smyth; Treasurer, W. H. Wells. The company proposes to instal instruments in the villages of Princeton, Drumbo, Eastwood and Gobles, with possible extensions southerly to Cathcart, and easterly to Paris.

C. F. Sise, Jr., recently stated that owing to the exceptionally favorable weather, the Bell Telephone Co. had got through its outside construction for the year more speedily than usual, which accounted for the reduction of the construction staff. This reduction gave rise to press reports that the company had entered on a policy of retrenchment in Ontario and Western Canada.

The Bell Telephone Co. has arranged to instal a large switchboard for the C.P.R. at Winnipeg, Man., to take the place of the one now in use at the Royal Alexandra, which will in future be used only for hotel connections. It is stated that the new switchboard will be located behind the telegraph office at the station, and will require seven operators. All the offices and departments connected with the system will have direct connection.

The Dunnville Telephone Co. is reported to have purchased the business and outside plant, except what is required for long distance lines, of the Bell Telephone Co. in Caistor, Gainsborough, a portion of Wainfleet, a township in Brant county, and the whole county of Haldimand, Ont. There will be no change in the rates, but subscribers will have the advantage of the long distance connections with the Bell Co., who will construct a new long distance line to Dunnville.

An agreement between East Toronto Council and the Independent Telephone Co. was discussed at the Council meeting, Oct. 28. The company is to provide five free telephones with unlimited service, and free interchange of service between the companies operating in East Toronto and Scarborough, for a 25 years' franchise. The charge for instruments is to be $24 and $18 with unlimited service, for business and private use, respectively, and where there are party lines, $21 and $15 respectively. As a penalty in case of unsatisfactory service, the agreement provides that the charges by the company be reduced to $18 and $12, respectively.

The British Columbia Car Service Bureau has been changed to the Canadian Car Service Bureau, B.C. Lines. E. J. Travers, Nelson, B.C., is Manager. He is also Manager of the B.C. Lines Freight Inspection Bureau of the Canadian Freight Association. H. R. Patriarche, Manager of the Canadian Car Service Bureau, Western Lines, formerly had jurisdiction over freight inspection in British Columbia, but this has been transferred to Mr. Travers.

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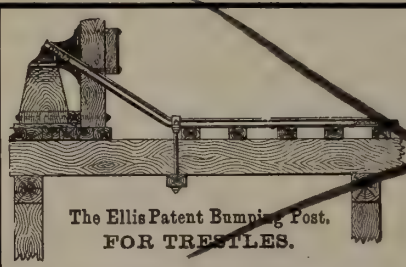

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Angle Bars
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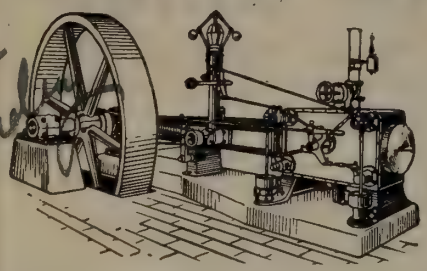

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The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal.

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tank.
S. F. Bowser & Co., Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto.

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

Pictorial Post Cards
Valentine & Sons Publishing Co.....Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit Mich.

Ploughs, Contractors'
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
N. J. Holden Co., Ltd.....Montreal.
Independent Pneumatic Tool Co....Chicago, Ill.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Preservative for Wood
Carbolite Carbolineum Co.....Toronto.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Propeller Wheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.
Sheriffs Manufacturing Co.....Milwaukee, Wis.

Pumps
S. F. Bowser & Co., Limited.....Toronto
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
Mussens Limited.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada.....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Reaming Machines
Independent Pneumatic Tool Co....Chicago, Ill.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co.....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Forest City Paving & Construction Co., London, Ont.
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scrapers (Wheel and Drag)
Bechtels Limited.....Waterloo, Ont.
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.

Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
Polson Iron Works.....Toronto.

Shop Furnaces
Railways Materials Co.....New York.

Shops
Steel Concrete Co. (Ltd.).....Montreal.
The Hudson's Bay Co.....

Side Bearings
Dominion Car and Foundry Co.....Montreal.

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PATENT WATER-TUBE BOILERS
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The Purchasing Agents' Guide—Continued.

Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago, Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Mfg. Co.....Cobourg, Ont.
Rhodes Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston, Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Yard Paving (Preservative)
Carbolite Carbolineum Co.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steam Steering Engines for Tugs
Sheriffs Mfg. Co.....Milwaukee Wis.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
Mussens Limited.....Montreal.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stores
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co.Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Tapping Machines
Independent Pneumatic Tool Co.....Chicago, Ill.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Telegraph and Telephone Poles (Preservative)
Carbolite Carbolineum Co.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.

Ties (Preservative)
Carbolite Carbolineum Co.....Toronto.

Tiling, Glass
E. F. Dartnell.....Montreal.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Traps, Fish Strainer and Tilting Steam
Golden-AndersonValve SpecialtyCo.,Pittsburg, Pa.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turbine Waterwheels
W. Kennedy & Sons (Ltd.)...Owen Sound, Ont.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters-
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Altitude
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Valves, Angle
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Automatic Float
Golden-Anderson Valve SpecialtyCo.,Pittsburg,Pa.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.
Golden-AndersonValve SpecialtyCo ,Pittsburg, Pa.

Valves, Cushioned, non-return
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Reducing
Golden-AndersonValve SpecialtyCo.,Pittsburg,Pa.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill, Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B. J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Columns
Golden-AndersonValve SpecialtyCo ,Pittsburg,Pa.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa.

Wheel Scrapers
Bechtels, Limited.....Waterloo, Ont.

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa.

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
Mussens Limited.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wood (Preservative)
Carbolite Carbolineum Co.....Toronto.

Wrecking Cranes
Mussens Limited.....Montreal.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

DOMINION CAR & FOUNDRY CO.

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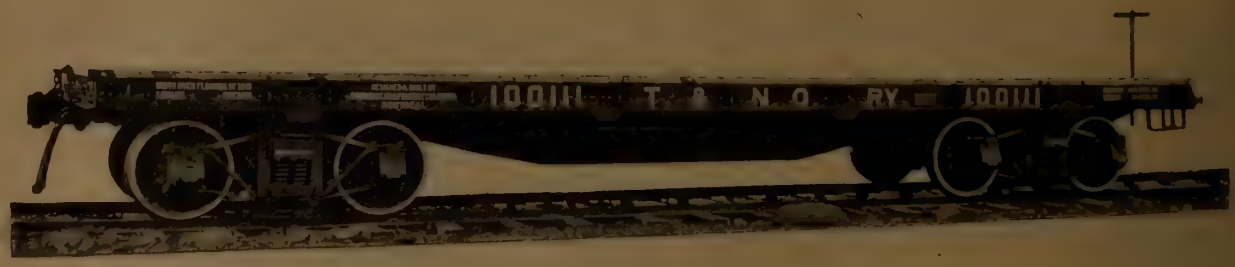

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New Series, No. 118.

TORONTO, CANADA, DECEMBER, 1907

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Agents wanted in unrepresented districts.

Railroad Employees and Collective Insurance a specialty.

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SEE ADVT. PAGE 878

Additional safety and economy in

TRACK MAINTENANCE

has been proven by the use of Continuous, Weber and Wolhaupter base-supported rail joints—after ten years' service, having a record of over 25,000 miles in use—the extent of which is evidence of their excellence.

The Rail Joint Co. of Canada

See Page 902

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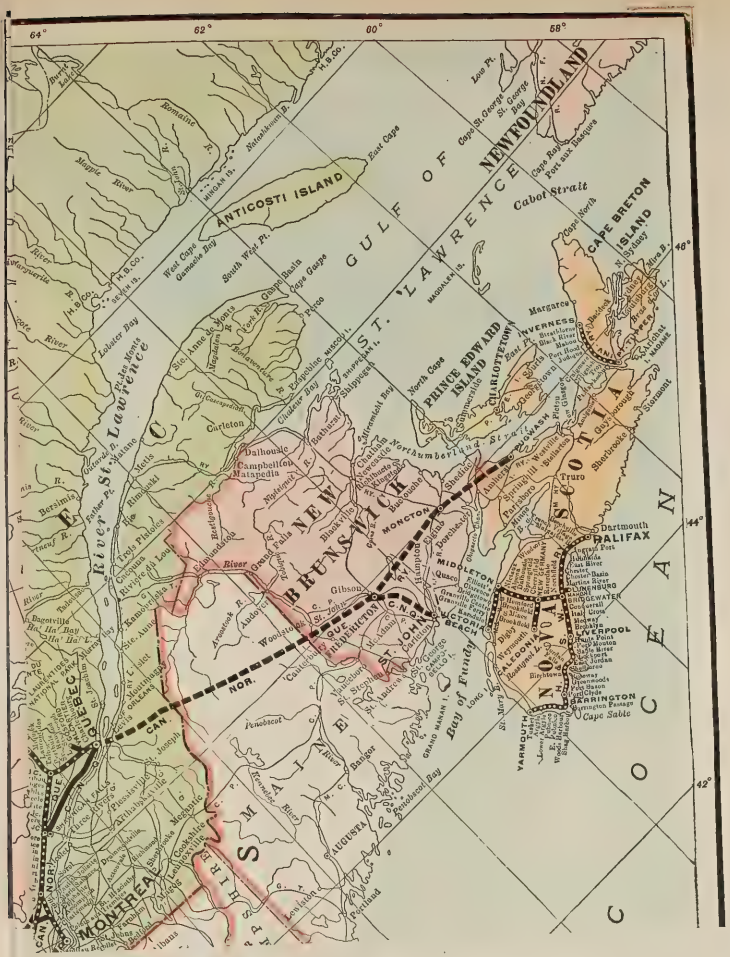
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58°
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ANTICOSTI ISLAND
Cabot Strait
CAPE BRETON ISLAND
PRINCE EDWARD ISLAND
NOVA SCOTIA
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HALIFAX
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ATLANTIC OCEAN
QUEBEC
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Guysborough
Sydney
Glace Bay
North Sydney
Port Hawkesbury
Inverness
Margaree
Baddeck
Orangedale
Whycocomagh
Port Hood
Mabou
Cheticamp
Louisburg
Arichat
Canso
Pictou
Tatamagouche
Wallace
Amherst
Parrsboro
Advocate Harbour
Five Islands
Economy
Londonderry
Truro
Tatamagouche
Pugwash
Wallace
Northumberland Strait
Shediac
Cape Tormentine
Buctouche
Richibucto
Chatham
Newcastle
Dalhousie
Campbellton
Matapedia
Metapedia
Restigouche R.
Bathurst
Caraquet
Shippegan
Tracadie
Miscou I.
Miscou Harbour
Caraquet Harbour
Bathurst Harbour
Nepisiguit R.
Chaleur Bay
Gaspé Basin
Gaspé
Percé
Cape Gaspé
Cape Rosier
Forillon
Port Daniel
Carleton
Paspebiac
New Richmond
Port Ristigouche
Escuminac
Escuminac Point
Miramichi Bay
Miramichi R.
Chatham
Newcastle
Douglastown
Loggieville
Nelson
Beaubears Island
Grand Manan I.
Grand Manan Channel
Passamaquoddy Bay
St. Andrews
St. Stephen
St. Croix R.
Calais
Milltown
St. George
St. John
Fairville
Musquash
Lepreau
Dipper Harbour
Black River
Maces Bay
Deer Island
Campobello I.
Welshpool
Head Harbour
Head Harbour Passage
Letang
Back Bay
Bocabec
Oak Bay
Chamcook
Waweig
Digdeguash
Bayside
Dumbarton
Scotch Fixed Ldg.
Red Head
Manawagonish
Simonds
Courtenay Bay
Lancaster
Millidgeville

See Purchasing Agents' Guide on page 949

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THE

Railway and Marine World

With which are incorporated The Western World and The Railway and Shipping World, Established 1890

Devoted to Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' interests

Old Series, No. 200.
New Series, No. 118

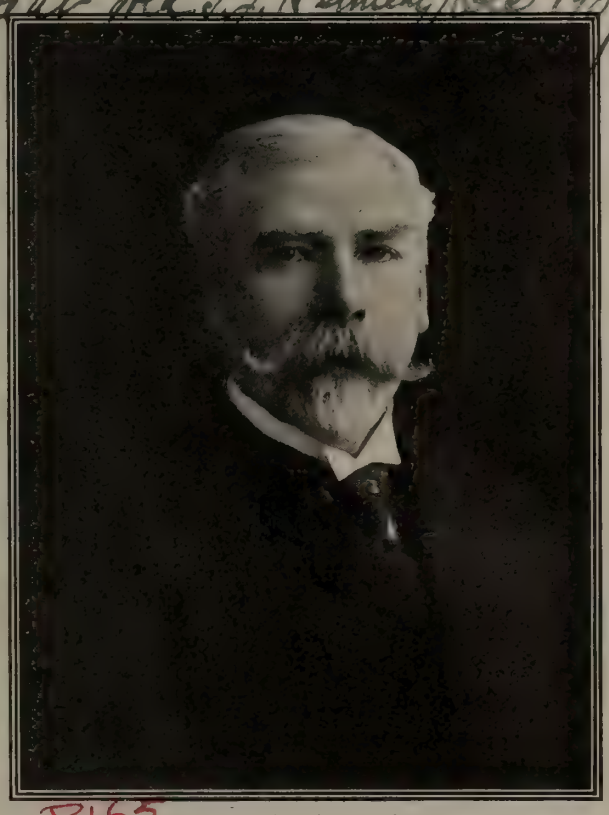
TORONTO, CANADA, DECEMBER, 1907.

For Subscription Rates. See page 913.

G.T.R. Semi-Annual Meeting.

The President, Sir C. Rivers Wilson, at the half-yearly meeting of shareholders in London, Eng., Oct. 10, gave a general summary and analysis of the accounts and statistical tables published in our last issue. He said: We have again a considerable increase of gross revenue, accompanied, unfortunately, by a considerable accretion of expenses, but also accompanied by a record of large improvements in the general condition of your road. The gross receipts during the past half-year were £3,381,259, compared with £3,021,681 in the corresponding period of 1906. Of this increase £59,388 was derived from passenger traffic, £8,247 from mails and express traffic, and £291,948 from freight and live-stock traffic, but there was a trifling decrease in the miscellaneous receipts. The number of passengers carried was 4,936,016, compared with 4,616,957 in 1906, accompanied by a slight increase in the average fare received per passenger. The tons of freight and live-stock moved were 8,510,574, compared with 7,598,784, and the average rate received increased from 62.54d. per ton in 1906 to 64.07d. per ton in 1907. In connection with the movement of freight traffic, it is interesting to note the effect of the increased capacity of the freight cars during the last few years. I find on making a comparison with the June half-year of 1903, that although the ton mileage has increased by 200 millions, or more than 14%, the freight car mileage has decreased by five million miles, or 3½%, or going back a further five years to 1898, when we were beginning to improve the equipment the ton mileage shows an increase of 72%, whilst the car mileage only increased by 12%. The freight and mixed train mileage—the mixed being principally freight—showed a decrease of 3% compared with 1903, and notwithstanding the enormous increase of ton mileage compared with 1898, the train mileage only increased by a little over 4%. The average train load has increased compared with 1903 by 17%, and compared with 1898, by over 60%. It is only by improving the facilities for moving the traffic that we have been able to meet the constantly increasing expenditure of all kinds, and it is only by continuing the process that we can hope for continued improvement.

The working expenses were £2,486,544, or 73.54% of the gross receipts, compared with £2,184,821, or 72.31%, an increase of 1.23% in proportion to the gross receipts. The expenditure on the maintenance of way and structures is exactly the same as for the corresponding half-year, although there are slight variations in the different items of the account. The cost of the maintenance of equipment was £653,285, compared with £564,738, an increase of £88,547, of which £19,557 was in respect of locomotives, and £68,990 in respect of cars. The necessity of proceeding as rapidly as possible with the replacement of the older engines and cars by modern engines and cars of increased capacity, is the cause of, and fully justifies, this increase. Considerable progress has been made in this direction, 48 new engines have been put into service during the half-year, and as 75 engines were put into service during the previous half-year, out of our official stock of 803 locomotives, 123 are practically new, and, of course, of far greater hauling capacity than those which they replaced.



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T. J. KENNEDY, C.E.
General Superintendent Algoma Central & Hudson Bay Railway.

The cost of conducting transportation shows an increase from £1,177,307 in 1906, to £1,387,343 in the past half-year. A portion of this increase is, of course, due to the increase in the business done, but a large proportion is also due to the increases we have had to make in the wages of all classes of employes, and also to the increases in the cost of all materials and stores used in the working of the traffic, with the important exception of fuel for locomotives which, fortunately, has remained at practically the same figure as in the corresponding period. The other items in the accounts generally show increases, attributable to a great extent to the causes I have mentioned, but there is one item, and a very important one, the increase in which arises from other causes, and that is the item of car mileage, which shows an increase of £47,539, which is the balance we have had to pay to other companies for the use of their cars on our railway in excess of the amount we have received for the use of our cars on other railways. In the autumn of last year the majority of the railways increased the per diem charge of 25c. to 50c. a day, or double that which was paid during the June half-year of 1906. Based on our experience of 1906, as we own a large number of freight cars, our present stock being 29,000, and are ordinarily a large lender to other roads, this increased charge would have worked to our advantage, but, as illustrating the difficulties attending the working of a railway in this northern climate, the past winter proved more severe than the previous one, and a continuation of heavy business brought about a congestion at our terminals, with the result that the balance ran very heavily against us, principally in respect of coal cars, of which, owing to our insufficient supply, we had to use a large number belonging to other companies. You will see from the capital account that we have added an additional 1,000 coal cars to our stock, and the Board have decided to purchase a further 1,000 to be delivered next year, so that we shall be in a position to handle more of this traffic in our own cars, and so avoid this heavy charge for the use of other companies' cars, and at the same time obtain payment for the use of ours. Before leaving the question of cost of transportation, it is only right to point out, in justice to our officers, that notwithstanding the great increase in wages, and the loss in car mileage to which I have just referred, the proportion of these expenses to gross receipts, although higher than last year, is less than for the half-year ending June, 1905. The general expenses show an increase of £39,961, which is entirely due to the contribution of £40,000 to form a nucleus of a pension fund for employes. The remaining items on balance show a slight reduction. Taxes show a decrease of £36,821, owing to the arrears of Michigan taxes for 1902-3-4, amounting to £48,600, having been charged in the corresponding period of last year, but there was an increase in current taxation of £11,800, as compared with 1906.

The net traffic receipts were £894,716, which is considerably in excess of any amount previously earned in the June half-year. The net revenue credits were £131,077, and adding this to the net traffic receipts, we have £1,025,793 available for the payment of in-

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CHARLES MILLER,

PRESIDENT.

terest and dividend as the result of the working of the G.T.R. proper. The fixed charges, that is the rentals and interest on bonds and debenture stocks, absorbed £611,704, leaving a surplus of £414,089, but, unfortunately, this amount has been considerably depleted by the deficiencies which had to be met in respect of the working of the Canada Atlantic and Detroit, Grand Haven and Milwaukee railways, which amounted together to £98,770, and reduced the surplus actually available for dividends to £315,319, as compared with £309,861, and adding this to the amount of £13,231 brought forward from last half-year, we get £328,550, out of which we recommend you to authorize the payment of the full dividends for the half-year on the 4% guaranteed stock and first and second preference stocks. The expenditure on capital account has been somewhat heavier than usual, and amounted to £432,579, of which the principal item was £360,329 for 1,975 cars, part of the 2,500 cars the purchase of which I referred to at our meeting a year ago.

Before leaving the accounts, I should like to say one word on the general question of expenditure. The surprise that is sometimes expressed at the continual and heavy increases of outlay on the road by those who have imperfect means of information is quite intelligible, but I venture to think that some figures I will lay before you will show, in form of comparison, how absolutely impossible it is to escape from the consequences of the enormous rise of wages and increased cost of material. The ratio of working expenses to gross receipts on the G.T.R. rose for the June half-year, as compared with 1906, from 72.31% to 73.54%. In the case of the great Pennsylvania system the ratio rose from 72.37% to 74.56%, and in the case of the New York Central system the ratio rose from 75.94% to 78.76%. So you will observe that not only are the ratios of both those great railways higher than that of the G.T.R., but that their expenses during the last half-year increased in greater proportion. The Canadian Pacific, whose ratio, on account of higher rates and longer haul, is normally less than ours, shows on the half-year an increase of 4.77%, against our 1.23%, bringing the ratio up to 69.16%.

I alluded just now to the large increases we have been compelled to make in employes' wages. The labor question is, indeed, one of the most serious with which we have to contend. Owing to the great prosperity of the country, and the insufficient supply of labor to meet the demands of the numerous growing industries, and of the extensive railway construction throughout the country, there is great difficulty in retaining men in our employment. The increase of the payrolls of the system in the half-year ended June 30 last, was £200,000, the larger portion of which is due to additions to wages, irrespective of increased business, and further advances have been made in the current half-year. The Dominion Parliament last session passed the Industrial Disputes Investigation Act, establishing machinery for the adjustment of trade disputes. It contains some useful and practical provisions which appeal likely to simplify the settlement of differences between employers and employed. Its principal features are that on application of either party the Minister of Labor may appoint a board of three persons to hear the questions in dispute, one nominated by each party, with a third agreed upon by these two, or, in case of difference, appointed by the Minister. The act includes no compulsory provision for the enforcement of the Board's award, relying only upon the pressure of public opinion. On the other hand, there is a very useful provision which inflicts penalties for any strike or lockout pending the reference to the Board. The act has already been applied to two cases of dispute between our company and their machinists and engineers, and although the Board awarded increases of pay, amounting in the case of the machinists to between £20,000 and £25,000 a year, and in that of the engineers to about £23,000 a year, our officers express themselves satisfied with the action of the Board, and believe that the act may be the means of simplifying and assisting materially in the settlement of trade disputes. At the present time, no doubt, the tendency of these adjudications may be to increase wages, but it will be open to the company, when we fall upon bad times, to have recourse to the act to obtain reductions which it might otherwise be difficult to enforce. Now, of course, advance of wages is an obvious, and, no doubt, a powerful means for holding the men, but there is another, probably, in the long run, equally, if not more efficacious, namely, the inducement of a pension assured to the workman at the end of his service with the company. This principle has been now adopted by nearly all railway companies in Canada and the United States, and it seemed to receive the approval of our own shareholders when I recommended to them at our last meeting in April its application to our own company. In fact, its adoption by the G.T.R. has become an urgent necessity. And now I come to the item of £40,000 included in the half-year's accounts for the commencement of the proposed pension fund, as to which we have been exposed to a good deal of criticism. I have said that the matter is one of urgency. The scheme of pensions will come into effect on Jan. 1 next, and a good many retirements will take place at that date. We have thought it prudent, following the example of other companies who have established similar pension funds, to appropriate at once a substantial sum as a nucleus of the fund, to be afterwards supplemented by annual contributions, which will probably not exceed £14,000 or £15,000 a year. An act has been passed by the Dominion Parliament empowering the creation of this pension fund, which has now become practically obligatory. Had we not adopted it, and adopted it in a generous spirit, we should, without doubt, have lost many of our best men, who would contrast our treatment of them with that of other companies, and we should have placed ourselves in an invidious and unpopular position as regards both the public and the Railway Commission. It is imputed to us that the appropriation of this £40,000 has inflicted an injustice on the third preference shareholders. Very few complaints have reached us from our registered shareholders, and I may even add that of these a fair proportion smack much more of the speculator than of the real investor. But some of our financial advisers and critics are good enough to say that we are wanting in consideration—to whom? To the market operators. I appeal from the market operators who do not concern us, and who care nothing for the permanent interests of the company, and who look upon our securities as mere gambling counters in the game of speculation, and who by their operations in the market cause those fluctuations which are a source of disturbance and anxiety to our shareholders; I appeal from them to our own 48,000 proprietors, the vast majority of whom understand and approve the policy which the directors have pursued consistently ever since by your favor we have occupied our present position. The objects of that policy, which, I may claim, and claim with confidence, has up to the present time been attended with conspicuous success, have been the preservation, the improvement, and the consolidation of your property as a sound and well-assured investment for you and your children after you; and so long as I am President, and my friends here are directors, we shall never swerve from that policy, nor be deterred from continuing it by the clamor of persons who only have a transient and unreal interest in the company. In the present instance the directors would be unfaithful in their duty if they yielded to pressure from outside, and left this liability undischarged in the pretended interest of one class, whose interest, as a matter of fact, is bound up with all the others, and whose position has been so rapidly and so materially improved of late. It is our constant endeavor to reconcile the improvement of your property, and its maintenance at the highest standard of efficiency, with the natural desire of the shareholders to receive the largest possible return on their investments, and if the present good traffics are maintained between now and the end of the year, I see no reason why the rate of dividend which was paid upon the third preference stock for 1906 may not be improved upon when the accounts for the current half-year are made up.

The accounts of our subsidiary companies contained in the report show, that while the Grand Trunk Western Ry. continues the course of prosperity which has resulted from the reorganization of 1900, and the subsequent improvement of the road, the Detroit, Grand Haven and Milwaukee and Canada Atlantic Railways present less satisfactory results. The Detroit, Grand Haven and Milwaukee is about £12,000 worse off than last year, but returns about exactly the same net revenue as in 1905. The work of improvement on the Canada Atlantic Ry. has not yet reached the point where the anticipated financial results can be realized. One troublesome work, which is still in progress, but far advanced, of an expensive character, and not properly chargeable to capital, is the filling up of numerous timber trestles, covering about 12 miles, which has been the cause of serious interference with traffic, and contributes largely to the falling off of receipts. On the other hand, the expenditure required for bringing the road up to standard has proved greater than was originally contemplated. Mr. Hays assures us, however, that we have seen the worst of these extraordinary expenses chargeable to revenue, and alluding to the supreme importance of not allowing this road to fall into the hands of competitors, which, you will remember, was one of the reasons for its acquisition by the Grand Trunk, the General Manager writes to me: "Any deficit we make in the net earnings from the operation of the line is a bagatelle compared with the injury that might have been inflicted upon us had one of the other interests acquired the road." One incidental, but important, advantage obtained by the acquisition of the Canada Atlantic Ry. has been the possession of terminals in the centre of Ottawa, a circumstance greatly enhancing the position and prestige of the company. Arrangements have lately been concluded for the erection of a new union station at Ottawa, and in connection with it an hotel, by an issue of bonds of a terminal company created for the purpose. The erection of the hotel has been strongly urged upon us by the Government of Canada. At present Ottawa, the metropolis of the Dominion, the seat of the Government and the Legislature, rapidly increasing in population and wealth, is entirely devoid of any decent hotel accommodation. Sir Wilfrid Laurier has taken a warm interest in the matter, and at his instance a beautiful site in the best part of the city has been sold to the terminal company by the Government for a reasonable sum, on which the hotel will be erected, communicating directly with the station. We have every reason to believe that both directly and indirectly the existence of the hotel will be of signal advantage to our company.

If progress on the construction of the G.T. Pacific Ry. has been less rapid than was anticipated, mainly owing to considerations of weather and labor, and the difficulties of obtaining material, it is satisfactory to know

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that the work performed has been of the highest order, and that in the history of railway building in America or Canada no great road will ever have been, at its first opening, completed under such conditions of perfection as will be the case with the G.T. Pacific Ry. The authority of the Railway Commission is being asked, in anticipation of the official opening of the road, for permission to carry freight and effects for the accommodation of settlers over the portion of the road completed west of Portage la Prairie, and a considerable amount of wheat of this year's harvest will be forwarded from the territory adjacent to the line between that point and Miniota, a distance of about 140 miles. When the original conception of this great undertaking first presented itself to us—nay, was forced upon us—your directors convinced themselves, after giving the matter their most earnest consideration, and for the reasons which I laid before you at the time, that neglect of the opportunity then offered would be the signal for the decay of your company; while, on the other hand, its adoption under proper conditions offered the certain prospect of a great eventual accretion of prosperity to the G.T.R. We obtained those conditions, and I for one have never faltered in my conviction of the wisdom of the decision taken at that time, and which received the approval of the shareholders. You have the reversion of a great property. The scheme which we are carrying through is full of promise, but we must not disguise from ourselves that we must expect to encounter difficulties before it reaches its final consummation; therefore, I ask you to strengthen the hands of your directors and officers, thereby facilitating their task of preparing for the time when the new road will be completed, and while exercising your legitimate and useful function of criticising our actions, not to be too careful to question or object to the expenditure now being incurred, large as it may appear, which you may rely upon our using every endeavor to conduct with good judgment and with the utmost economy which circumstances will allow, but of which you will undoubtedly reap the benefit when the new road is brought into connection and operation with the old G.T.R.

The President then moved that the report of the directors and the accounts for the half-year ended June 30, 1907, now presented, be and the same are hereby approved and adopted, and that the following dividends be paid, viz: To the holders of the 4% guaranteed stock of £2 %. To the holders of the first preference stock of £2. 10s.%. To the holders of the second preference stock of £2. 10s. %.

After some criticism of the monthly statements of earnings and expenditures by J. Costello, an amendment to the effect "That it is desirable that greater vigilance be exercised over the expenditure in the management of the company's business," was submitted on motion of Mr. Seal, seconded by Mr. Jackson. A suggestion was made that a local board should be created in Canada, and in reply to the remarks of shareholders the President said: "I have only to say that if our 48,000 proprietors are unwise enough to contemplate such a thing as that for one single moment, I shall receive that announcement with the utmost astonishment. The whole of the securities of the G.T.R. are held, with a trifling exception, on this side of the Atlantic, and the vast majority in this country. Here every six months, every day if you like, you are face to face with your directors, and you can call them to account. We are here under your control. What would it be if you had got a set of gentlemen sitting in Canada whom you cannot get at, and whom you are not in touch with? If you remove the control to Canada, what will be the result? Canada has hardly one cent of interest in the finances of this company, and how do you suppose such a board would be able to resist pressure put upon them on all sides for the expenditure of more money? I contend the organization of this company is admirably adapted to English shareholders, and if any illustration is wanted, look at the success with which several of the great South American railways are controlled from this country, and where we never hear of such complaints. However, I do not think for a single moment such an arrangement would ever be adopted by the G.T.R. shareholders.

"A gentleman who spoke last wanted to know whether we should have any claim for compensation against the Canadian Government on account of their slackness in carrying out their portion of the new road, and also as against their action in imposing a heavy duty on steel rails. I do not know whether a claim for compensation would actually lie in a court of justice, but I may say this, that we have, in my judgment, a moral claim in respect of both these matters against the Canadian Government."

The resolution was then adopted, the amendment having previously been defeated.

American Locomotive Company.

The sixth annual report for the year ended June 30, shows gross earnings of $49,515,486.33, an increase of $6,967,609.93 over those of the preceding yeaf. The expenses were $42,744,381.30, an increase of $6,659,010.56 over those of the year preceding. In addition to liberal disbursements for the upkeep and replacement of the plants, included in expenses, there has been expended for improvements and additional property the sum of $1,692,858.82, which has been paid for out of the fund of $2,000,000 created June 30, 1906. The interest on the bonds of the several constituent companies, the short-term debenture notes of the American Locomotive Co. and other outstanding loans, together with minor miscellaneous interest and discount charges, amounted to $412,898.10. Out of the resulting profit, the regular dividend of 7%, or $1,750,000, has been paid to the holders of the preferred stock, as have also dividends aggregating 5%, or $1,250,000, to the holders of the common stock. In the fiscal year just closed the company has secured the largest output and transacted the heaviest volume of business in its history. Moreover, its capacity for handling future business has been substantially increased by the erection of new shop buildings, power plants, machinery, equipment, etc., principally at Schenectady, Dunkirk, Richmond and Montreal. To still further increase the capacity and efficiency of the plants there has again been created an extraordinary additions and betterment fund of $2,000,000. During the year, the outstanding bills payable, amounting to $3,300,000, have been paid off, and in their stead the company has issued a series of short-term gold coupon notes aggregating $5,000,000, bearing interest at the rate of five per cent. and maturing annually in sums of $1,000,000, on Oct. 1, from 1907 to 1911; thus providing an additional cash capital of $1,700,000, which was urgently needed, notwithstanding the large increase in working capital which has accumulated since the formation of the company in 1901. In April, 1907, the structural steel department, established at Montreal, was sold to the Structural Steel Co. As a necessary feature of the agreement of sale, the structural shop buildings and equipment at Montreal were leased to the new company for the term of two years, with an option for one additional year. The Montreal company will, therefore, devote its attention hereafter exclusively to the business of producing and selling locomotives, steam shovels and rotary snowplows, for all of which the rapid development of transportation and industrial enterprises in Canada offers a field of exceptional promise. On October 16, 1906, R. J. Gross was elected a director of the company, to fill the vacancy caused by the resignation of E. C. Converse. On March 1, 1907, the resignation of J. E. Sague as Vice-President in charge of engineering and manufacturing, became effective. H. F. Ball was elected Vice-President in charge of engineering and D. Van Alstyne, Vice-President in charge of manufacturing.

CONDENSED GENERAL BALANCE SHEET.

Cost of property		$46,925,096.20
SECURITIES OWNED—		
American Locomotive Co. preferred stock		900,000.00
Richmond Locomotive and Machine Works consolidated mortgage gold bonds		118,000.00
Rogers Locomotive Works capital stock		1,972,114.69
Sundry securities		406,800.00
		$ 3,396,914.69
CONVERTIBLE ASSETS—		
Cash		$ 2,654,230.29
Accounts collectible		10,399,961.34
Bills receivable		923,205.50
Accrued interest		17,440.00
Advances to American Locomotive Automobile Co.		1,772,260.31
Material and supplies		4,161,128.36
Contract work in course of construction		4,195,942.56
		$24,124,168.36
Locomotive and Machine Company of Montreal		$ 55,492.75
		$74,501,672.00
CAPITAL STOCK—		
Preferred		$25,000,000.00
Common		25,000,000.00
		$50,000,000.00
BONDED DEBT OF CONSTITUENT COMPANIES—		
Richmond Locomotive Works		$ 550,000.00
Dickson Manufacturing Co		562,500.00
Rogers Locomotive Works		380,000.00
Locomotive and Machine Co. of Montreal, Ltd		1,500,000.00
		$ 2,992,500.00
CURRENT LIABILITIES—		
Gold coupon notes		$ 5,000,000.00
Accounts payable		4,516,739.71
Accrued interest		98,604.16
Unclaimed interest		2,237.50
Dividend payable July 22, 1907		437,500.00
Dividend payable Aug. 26, 1907		312,500.00
		$10,367,581.37
Rogers Locomotive Works		$ 870,869.65
Extraordinary additions and betterment fund		2,307,141.18
PROFIT AND LOSS—		
Bal. June 30, '06,	$6,605,372.87	
Surplus, as shown in summary of operations	1,358,206.93	7,963,579.80
		$74,501,672.00

Appended is the following note:

Prepared solely for the purposes of information, to show the combined assets and liabilities of the ten (10) plants controlled by the American Locomotive Company as the balance sheet would appear if the assets of the Rogers and Montreal Companies had been taken over by the American Locomotive Company and their debts assumed.

The bonded debt of the constituent companies includes bonds on the Richmond Locomotive Works, the Dickson Works, the Rogers Locomotive Works, and $1,500,000 of 4% gold bonds of the Locomotive and Machine Co. of Montreal, which will mature Mar. 1, 1924.

At the annual meeting of the stockholders held in New York city the report was adopted and J. Bryan, C. A. Coffin, S. L. Schoonmaker and G. R. Sheldon were elected directors for the term of three years. The meeting of directors for the election of officers has not been held.

A proposal is under consideration at St. Thomas, Ont., for the formation of a social club for railway officials. A committee consisting of representatives of the C.P.R., G.T.R., Wabash Rd., Michigan Central Rd., Pere Marquette Rd., Southwestern Traction Co., St. Thomas St. Ry., and of citizens interested in railway industries, has been appointed to consider the proposal and report at a future meeting.

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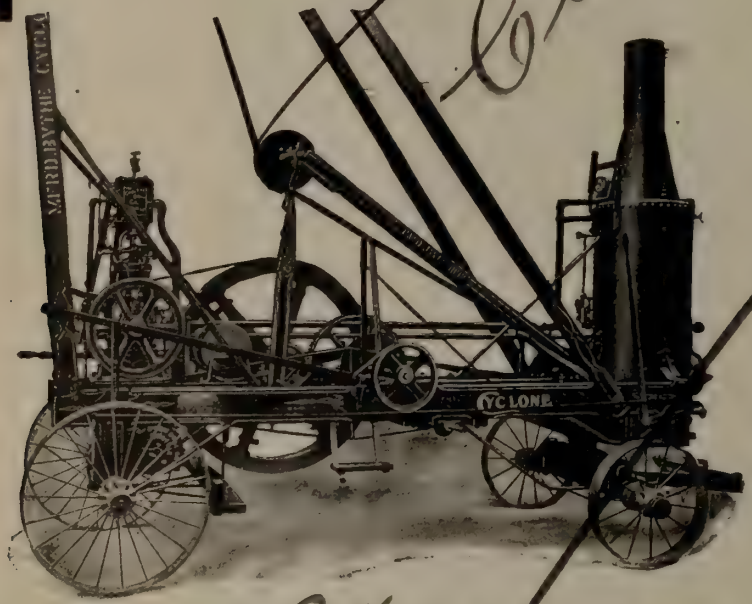

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Central Vermont Ry. Co.'s Report.

The eighth annual report of the directors of this company, which is controlled by the G.T.R., for the year ended June 30, presented at the annual meeting Oct. 8, gave the following particulars:

Gross receipts	$3,833,088.49
Operating expenses	3,041,513.12
Balance	$ 791,575.37
Taxes	103,194.57
Net earnings	$ 688,380.80
Other income, interest on securities held by the company	13,840.00
Total income	$ 702,220.80
Interest on bonds and rental of leased lines	700,407.38
Net surplus over fixed charges	$ 1,813.42

REVENUE.

Receipts from all sources....decrease,	$ 3,887.67

EXPENDITURE.

Maintenance of way and structures....decrease,	$ 12,364.38
Maintenance of equipment....decrease,	103,478.85
Conducting transportation....increase,	109,853.25
General expenses....decrease,	1,051.19
Total operating expenses....decrease,	7,041.17
Taxes....increase,	1,401.07
Fixed charges....increase,	4,455.27
Improvements included in operating expenses....decrease,	140,985.16

The property has been well maintained, and improvements to the extent of $200,962.01 have been made during the year, and included in operating expenses. Five hundred large capacity flat cars have been purchased at a cost of $295,000. The cars were acquired under an equipment trust agreement, providing for a cash payment of $29,500.00, and the balance to be paid in twenty equal semi-annual instalments, with interest at 4½% per annum.

The report is signed by C. M. Hays President, and the reports of various officers are appended.

E. H. Fitzhugh, Vice-President, in his report shows the improvement and extraordinary expenditures, included in operating expenditures, for the year to have been $200 962.01. This amount was distributed as follows: New bridges, $62,476.44; new tracks, sidings and spurs, $9,533.76; new fuel and water stations, engine houses and turntables, $13,937.78; new stations and warehouses, $4,074.52; new steel rails (difference of value between old rails taken up and new rails laid down), $3,980.38; new tools and machinery, $6,830; ballasting, $4,702.11; new locomotives, $20,000; new passenger cars, $45,715.77; new cabooses, $3,962.98; new freight cars, $15,243.89; new air brakes, $10,484.38. The train mileage was: Passenger, 1,131,763, increase, 65,060; freight, 1,341,322, decrease, 31,723; mixed, 133,733, decrease, 50,061; miles earning revenue, 2,606,818, decrease, 16,724; piloting, switching, light running, and work trains, 770,301, increase, 40,700; total engine miles run, 3,377,119, increase, 23,976. The car mileage was: Passenger, 5,007,522, increase, 59,321; freight, 28,174,011, decrease, 4,219,102; total car mileage, 33,181,533, decrease, 4,159,781. The percentage of expenses to earnings was 79.35 per cent. as compared with 79.45% in the preceding year, a decrease of .10%.

The percentage of improvements included in operating expenses to the earnings, was 5.24%, as compared with 8.91% in the preceding year. The percentage of ordinary expenses to the earnings, was 74.11%, as compared with 70.54% in the preceding year. The number of tons carried one mile was 263,692,229 a decrease of 16,379,257; the earnings per freight train mile were $1.74, an increase of 2 cents, and the earnings per ton per mile, 0.95 cent, an increase of 0.03 cent. The number of passengers carried one mile, 48,658,961, shows an increase of 3,196,769; the earnings per passenger train mile, $1.06, same as previous year, and the earnings per passenger mile 2.22 cents, a decrease of 0.06 cent.

Ten miles of track between Brattleboro and South Vernon have been ballasted with gravel and surfaced, and two trestles, 120 and 285 ft. in length respectively, on the Second District have been filled in. Extensions aggregating 2,584 ft. have been made to passing tracks, and 7,353 ft. of industrial sidings have been laid. New 80-lb. steel rail, releasing 75-lb. rail, has been laid in track as follows: 4.4 miles between West Hartford and White River Junction; 2.1 miles from Montpelier Junction south; 6.5 miles between Georgia and Colchester; .2 miles from Province Line south; and 2.3 miles of 75-lb. released rail have been relaid on the Southern Division. The stations at Stanbridge and Highgate Springs, burned Feb. 1 and Oct. 17, 1906, respectively, have been rebuilt, and a new station erected at Chambly Canton. A new drop pit has been constructed in the engine house at New London, and stalls in the engine houses at Brattleboro and White River Junction have been extended to accommodate the larger engines now running into those stations. New 70-ft. turntables have been installed at New London, Brattleboro and White River Junction, and the shorter tables released, placed at Barre, Burlington and Williamstown. A new 100,000 gallon water tank has been erected at St. Albans; a 44 ft. track scale installed at Bethel; and new stock yards built at Sharon, Northfield, Richmond and Williston. Five new steel bridges have been erected, two pile trestles rebuilt and extensive repairs made at five bridges.

Ten new compound consolidation freight engines, purchased in June, 1906, have been received during the year and placed in service. During the year, 76 engines have received heavy repairs, and 64 light repairs. Three new tenders have been built and five new tenders purchased. A number of machines have been purchased and added to the engine repair shop equipment at St. Albans.

Five hundred flat cars of 60,000 lbs. capacity have been purchased and added to the equipment. In addition to the regular maintenance and repair work, one sixty foot mail car, one flat car, seven refrigerator cars and six cabooses have been constructed in St. Albans shop. Air brakes have been applied to 187 freight cars, and the work of equipping all serviceable large capacity cars with air brakes is now in progress.

The winter was unusually severe. Protracted periods of exceedingly low temperature, together with the difficulty experienced in obtaining coal of good quality, impairing the efficiency of engines, resulted in congestion from which we did not recover until May; and the large number of foreign cars on the line in excess of Central Vermont equipment on other roads, caused an exceptionally large debit car mileage balance.

The total mileage operated is 701.6 miles, made up as follows: Main track (including 6.2 miles of double track), 203.2 miles; second main track, 6.2 miles; branch lines, 173.4 miles; yard tracks, sidings and spur tracks, 109.9 miles; making a total of 492.7 miles of track owned by the company. The leased lines consist of 123.5 miles of main line, 36 miles of branch lines, and 49.4 miles of yard tracks, sidings and spur tracks. The condensed balance sheet is as follows:

ASSETS.

Cost of road and equipment	$13,899,471.06
Bonds deposited with trustee	1,000,000.00
Materials and supplies on hand	288,307.84
Cash on hand and in transit	187,971.61
Investment in bonds	342,779.68
Equipment renewals	722,755.67
Carried forward	$15,941,285.86
Brought forward	$15,941,285.86
Sundry accounts collectible:	
Due from agents	131,867.57
Due from U.S. and Canada, carrying mails	22,548.58
Due from sundry railroads and individuals	314,114.50
Advances fast freight line, account working fund	9,950.00
	$16,919,766.51

LIABILITIES.

First mortgage bonds	$12,000,000.00
Common stock	3,000,000.00
Interest due	12,339.10
Interest accrued not due	78,637.07
Taxes accrued not due	60,485.05
Sundry accounts payable:	
Vouchers and pay rolls	763,531.90
Sundry railroads and individuals	126,662.72
Notes payable	175,000.00
Equipment trust notes	681,000.00
Profit and loss	22,110.67
	$16,919,766.51

Following are the officers and directors for the current year: President, C. M. Hays, Montreal; Vice-President, E. H. Fitzhugh, Montreal; General Manager, G. C. Jones, St. Albans, Vt.; other directors: E. C. Smith, St. Albans; W. S. Webb, Shelburne, Vt.; J. W. Stewart, Middlebury, Vt.; J. G. McCullough, Bennington, Vt.; E. H. Baker, H. B. Day, Boston, Mass.; A. Tuttle, Fair Haven, Vt.; C. P. Smith, Burlington, Vt.; S. E. Kilner, E. L. Marston, New York City. Treasurer and Clerk, W. H. Chaffee, St. Albans; Auditor, W. G. Crabbe, St. Albans.

C. P. R. Lands and Bonds.

During the fiscal year ended June 30, the C.P.R. sold lands amounting to 994,840 acres, realizing $5,887,377, or an average of $5.92 an acre. Portions of these sales were at a rate between $4 and $5 an acre, under terms of contracts made previous to the commencement of the year, and this tended to keep down the average. Apart from this, the average price for lands actually sold during the year was $8.09 an acre.

At the incorporation of the company in 1881 a grant was made by the Dominion Government of 25,000,000 acres of land, in addition to a cash subsidy of $25,000,000. Other land grants brought the total up to 32,000,000 acres. At that time, the land was of practically no market value, and has only been made so by the opening up of the country by the company. With the extension of its lines the value of the land has risen rapidly, and it is of interest to note a comparison between the value of the remaining lands at the average price realized last year, and the total bonded debt of the company.

The total bonded debt is as follows:

1st mortgage 5% bonds	$34,998,633
Canada Central Ry. 6% bonds	973,333
Algoma Branch 1st mortgage bonds	3,650,000
North Shore Ry. 1st mortgage bonds	616,119
	$40,238,085

Of unsold lands the company still holds 8,905,823 acres of the original grant, in addition to 3,419,673 acres in British Columbia, and 2,500,000 acres which it is to receive through the Columbia and Western Ry., making a grand total of 14,825,496 acres. This, at the average of $8.09 an acre, would produce, approximately, $120,000,000; and it is only reasonable to expect that the average price per acre obtained last year will be increased in the near future.

The Montreal Y.M.C.A. railway branch has a membership of 400, and through the generous co-operation of the G.T.R. a building has been erected for its use. The building contains gymnasium, bowling alleys, baths, social rooms, reading room and library, class rooms, dormitories and restaurant. The educational work is outlined to meet the special requirements of the membership.

The Locomotive and Machine Company of Montreal, Limited

IMPERIAL BANK BUILDING, VICTORIA SQUARE, MONTREAL, CANADA

Builders of Locomotives for all Classes of Service

Structural Steel

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BRIDGES, BUILDINGS, ROOF TRUSSES, ETC.

NEW YORK OFFICE:
American Locomotive Company,
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LONDON OFFICE:
Alfred Davis, 26 Victoria Street,
Westminster, S.W.

Canadian Northern Railway Report.

The following directors' report, over the signature of W. Mackenzie, President, was submitted at the annual meeting of shareholders in Toronto, Oct. 16.

The result of the company's operations for the fiscal year ended June 30, 1907, are as follows:

GROSS EARNINGS.

Passenger traffic	$1,464,256.18
Freight traffic	5,741,729.25
Express, mail, telegraph, dining and sleeping cars, interest on deferred land payments, and profits from elevators and other subsidiary comp'nies	1,144,212.65
	$8,350,198.08
WORKING EXPENSES (including taxes)	5,424,163.65
Net earnings	$2,926,034.43
Fixed charges	1,882,489.14
Surplus for the year	$1,043,545.29

The gross earnings show an increase over the preceding year of $2,446,442.47, or 41.44%, and net earnings a gain of $697,011.67, or 31.27%. The increases are gratifying both in passenger and freight receipts. New settlers have been brought into all the districts served by the railway. The tonnage of grain, lumber and general merchandise hauled has been much heavier than in previous years, owing to the increased mileage in operation, and especially to the larger areas of land brought under cultivation along the older portions of the line. The directors invite attention to the high percentage of increase in the quantity of flour handled, as showing how quickly industries allied to agriculture are being founded in Western Canada. The working expenses were 73.49% of the gross earnings of the railway proper, and 64.96% of the gross earnings from all sources, compared with 66.49% and 62.24% respectively last year. The large increase in working expenses is due to the unprecedented character of the winter and the greater cost of labor and materials. The winter was the severest ever known in Western Canada, in persistence of low temperature, depth of snow, and duration into the spring season. In Dec., Jan., Feb. and March the operating department was obliged to devote itself to keeping communications open; this made it impossible for the traffic to earn expenses. During all the years in which the company has been in operation, no such winter has been met with, and it is but reasonable to expect that a repetition of it will not occur for many years to come. These difficulties of operation were not singular to this line, but were common to all lines in the Northwestern States as well as Western Canada. The crop following these adverse conditions, though not equal to those of some recent years, is much better than had been anticipated, and is more favorable than the crops in many other parts of the world, where the spring and summer were also unpropitious. The fertility of the soil and the character of the climate have been put to an extreme test and the results have been such that the directors regard the future with every confidence.

It was stated in the press during the winter that the company's equipment was insufficient to handle the traffic offered. While the extremely rapid development of the lines, and the unexampled growth of traffic upon them, have necessitated orders for equipment which have kept the car builders continuously behind in the delivery of rolling stock ordered by the company, the delays of last winter were primarily due to weather conditions. In a normal season the traffic would have been handled without inconvenience to shippers; but the facts just cited imposed upon the railway all the disadvantages of congestion, without its compensations in revenue. As soon as spring came the congestion was expeditiously relieved. The increased cost of labor and supplies has been common to all enterprises in Canada, but the directors have employed every reasonable safeguard against undue expenditure, and will continue to do so. In the Provinces of Manitoba, Saskatchewan and Alberta, the needs of the districts served by the railway are so widespread that additional equipment of all kinds, and other facilities for the speedy handling of business must be provided. New lines are under construction to meet the demands of farmers who are already producing immense quantities of grain for remunerative shipment. Other lines are contemplated that will not only serve new localities, but, by acting as feeders, will protect the enormous revenue-producing areas which the railway has been the means of opening up. The development of these comparatively new districts during the current year has required the expenditure of large sums on structural and mechanical improvements. The roadbed has been further improved by extensive ballasting. Many stations have been built; and others enlarged. New sidings have been laid and others lengthened. At divisional points the engine-houses have been furnished with more machinery for engine and other repairs, and up-to-date plants for handling coal have been installed. Water stations have been increased and enlarged, freight sheds have been erected in many towns, and at Port Arthur particularly new accommodation for freight has been provided to keep pace with the needs of the port. At various points stockyards have been constructed. The growth of business has necessitated, in addition to these improvements, the purchase of a great deal of new rolling stock, and attention is invited to the statement of equipment, which shows the character and extent of the additions made during the year. Delivery has been constant and will continue during the current year.

The directors desire to draw attention to the land accounts, which are incorporated for the first time in the general balance sheet. In respect of lands sold, over $3,000,000 has been collected, and is held in trust by the National Trust Co. to retire the land grant bonds, amounting to $2,000,000, now outstanding. Deferred payments on land sales still to be collected amount to $4,871,038.94. The company also has a stock interest in the Canadian Northern Prairie Lands Co., which shows a substantial profit on the market value of the stock taken into the railway company's accounts. Of land still unsold there are 1,828,251 acres, so that even if present land values do not advance—and the directors have no doubt that they will advance in the immediate future—a very substantial asset will accrue to the railway company. While it is especially gratifying to the directors that the company's lands have proved so attractive to settlers from the Middle and Western States, because they are thoroughly experienced in prairie farming, and, besides, being good judges of land, bring it rapidly into cultivation and thus create traffic for the railway, it is more desirable than ever to encourage the immigration of families of good British stock. The Dominion Government is doing admirable work in this direction, and a large proportion of the arrivals of recent years are settled near the railway. During August a party of British journalists travelled from Edmonton to Port Arthur over the railway, and investigated for themselves the progress made by their countrymen. The directors have observed with satisfaction, in the papers represented, very favorable accounts of the country travelled and the conditions examined, and hope to see an even larger immigration from the British Isles.

The directors are glad to call attention to the greatly enhanced value of the company's terminals at Winnipeg, Port Arthur, Edmonton and other divisional points, arising from the general expansion of commerce in Western Canada, as well as from the development along the company's own lines. An estimate of an increase of over $3,000,000 in this respect is quite conservative, and is not based on such high values as those at which contiguous property in the cities and towns referred to have changed hands. The number of industries actually established in Winnipeg and elsewhere, together with large extensions of wholesale trade, are excellent indications of the permanence of business arising from the growth of settlement along the older railways, and the opening up of new territory by your own lines. The increase of urban population has been healthy and not dependent on the more speculative enterprises which sometimes accompany, but do not really affect, the filling up of a vast fertile territory.

The directors note with special gratification the establishment of blast furnaces at Port Arthur, which, from ore brought over the railway from the Atikokan mines, have, since July, been producing first-class pig-iron. Steps are being taken to double the output, and with the assured development at Port Arthur of manufactories using iron and steel the western market will naturally be supplied from Port Arthur, to the great advantage of the railway. Other mines, rich in iron, and tributary to the main line west of Port Arthur, are being opened up, and arrangements are now being completed which will insure heavy shipments of ore immediately navigation opens in 1908. The iron ranges tapped by the main line are similar to those in the adjoining State of Minnesota, which have furnished the railways serving them with unprecedented revenues; and there is every reason to anticipate that the movement of ore from the Atikokan and Mattawin ranges will ultimately be such as to earn large revenues. Several new industries have recently been secured by the cities of Port Arthur and Fort William, which will contribute still further to the noteworthy expansion which has already taken place in connection with the company's terminals. The coal docks are without a superior in equipment. They already handle 600,000 tons in a season; and do it so expeditiously as to effect a material saving in the cost of waterborne fuel, for which there is an enormously increased demand in the Western Provinces year by year.

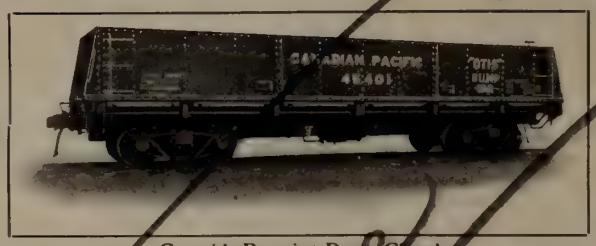
The direct water connection via Parry Sound and the Canadian Northern Ontario Ry. with Toronto and other Ontario points, which was established this year, has, by considerably increasing the traffic through Port Arthur to all western points, not only enhanced the value of the company's terminal property there, but has begun the diversion to the Canadian Northern Ontario Ry. of a large proportion of profitable traffic to and from the Western Provinces.

The City of Edmonton has continued to progress rapidly. Several new industries are being established, for which there is ample scope, and coal mining in the immediate vicinity has been greatly extended. As your terminals are immediately adjacent to the business centre of Edmonton, there is a corresponding gain to the company.

The lines of the Canadian Northern Quebec Ry. necessary to give the company the full advantage of connection with this system have not yet been completed. They are, however, under construction, and will be finished next year. The increase in gross earnings has been well maintained since the close of the fiscal year, the reported figures for the months of July, August and Sept. being $2,618,200, compared with $1,823,100 for the same period in 1906, an increase of $795,100.

The accounts and statistical tables appended to the report are submitted by D. B. Hanna, Third Vice-President, as follows:

Otis Type All Steel Dumping Gondola



Car with Dumping Doors Closed

This Car has Flat Bottom. Can be Shoveled or Dumped. All Doors operated from End Sill. The Dumping Doors are supported solidly in both open and closed positions.

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Capacity 50 Tons

Car with Half the Doors Open—Showing Apron

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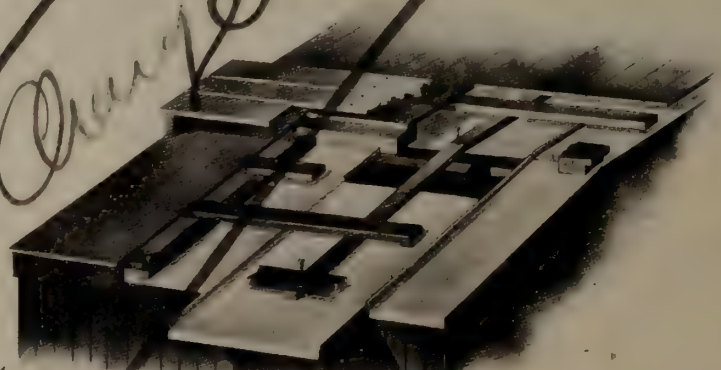
Hutchins All Metal Inside Car Roofs

Thousands in Service—Not a Single Failure. No Possibility of Roof Leaking



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CONDENSED GENERAL BALANCE SHEET.

COST OF RAILWAY AND EQUIPMENT		$77,540,324.19
Minnesota and Ontario Bridge Co.—		
4½% first mortgage debenture bonds	$ 180,000.00	
Capital stock	100,000.00	
Minnesota and Manitoba R.R.—		
5% general mortgage bonds	$ 250,000.00	
Capital stock	400,000.00	
Lake Superior Terminals Co., Ltd.—		
5% mortgage gold b'ds	$ 1,000,000.00	
Capital stock	500,000.00	
Canadian Northern Telegraph Co.—		
5% general mortgage bonds	$ 300,000.00	
Capital stock	500,000.00	
Winnipeg Land Co., Ltd.—		
5% first mortgage gold bonds	$ 300,000.00	
Capital stock	100,000.00	
	$3,630,000.00	
Taken to account at the actual cost to the company	1,946,666.66	
Stock of Canadian Northern Prairie Lands Co., and advances to other companies, etc.	1,045,036.43	
		$2,991,703.09
Deferred payments on land sales		4,871,038.94
Value of material and supplies on hand	539,077.77	
Due from agents, companies, traffic balances, etc.	892,278.60	1,431,356.37
Cash with National Trust Co., account of land sales	3,104,620.70	
Cash on hand	927,782.45	4,032,403.15
		$90,866,825.74

In addition to the above assets the company owns 1,828,251 acres of land in Manitoba and Saskatchewan.

By capital stock	$30,750,000.00
Bonds	25,652,983.38
4% perpetual consolidated debenture stock	14,321,383.32
Land grant bonds	2,000,000.00
Car Trust obligations	6,311,618.56
Unpaid pay rolls	$530,519.54
Unpaid audited vouchers	840,274.66
Due to other companies	855,012.56
Accrued interest on bonds, etc., to date	149,392.08
	2,375,198.84
Equipment replacement fund	21,405.20
Surplus railway	2,669,598.93

LAND GRANT ACCOUNT.

Gross land sales	$8,764,637.51	
Less land grant bonds, as above, money to redeem which is in hands of National Trust Co.	2,000,000.00	
Surplus in land grant account		6,764,637.51
		$90,866,825.74

DETAILS OF FIXED CHARGES.

Bonds guaranteed as to principal and interest by Government of Manitoba—

Amount	Date of Issue	Annual Charge
£2,231,800	June 30, 1904	$393,911.12
£1,180,600	Sept. 30, 1901	230,815.03

Bonds guaranteed as to principal and interest by Dominion Government—.

£1,923,287	July 29, 1903	$280,799.90

Four per cent. perpetual consolidated debenture stock—

£2,942,750	(For part of year only)	$446,054.30

Leased lines—

Northern Pacific and Manitoba Ry	$210,000.00
Minnesota and Manitoba Rd	13,960.00
Interest on equipment securities	306,948.79
	$1,882,489.14

PASSENGER TRAFFIC.

	1907.	1906.
Number passengers carried	703,988	564,341
Number passengers carried one mile	60,683,505	47,182,065
Earnings per passenger per mile	cts. 02.835	cts. 02.522
Earnings per traffic train mile	$1.18.601	$1.13.002
Total passenger train earnings	$1,720,424.38	$1,190,194.97

FREIGHT TRAFFIC.

Number of tons carried	1,822,220	1,727,002
Number of tons carried one mile	657,437,305	535,298,197
Earnings per ton per mile.	cts. 00.873	cts. 00.810
Earnings per traffic train mile	$2.54.139	$2.22.141
Total freight train earnings	$5,741,729,25	$ 4,335,933,10

PASSENGER AND FREIGHT TRAFFIC, ETC.

Gross earnings per mile of road	$3,328.09	$2,860.34
Operating expenses per mile of road	2,161.88	1,780.39
Net earnings per mile of road	1,166.21	1,079.95
Amount required per mile of road to pay fixed charges, includ'g leased lines	750.27	786.05

TRAIN AND CAR MILEAGE.

Mileage of passenger trains	1,450,590	1,053,247
Mileage of freight trains	2,259,279	1,951,883

EXPENSES PER TRAFFIC TRAIN MILE.

Maintenance of way and structures	cts. 33.12	cts. 26.88
Maintenance of equipment	22.98	19.48
Conducting transportation	83.49	68.95
General expenses	05.29	06.97
Total	$1.44.88	$1.22.28

DESCRIPTION OF FREIGHT CARRIED.—The figures in brackets are those for the year ended June 30, 1906: Flour, 844,500 sacks (483,819); grain, 19,853,142 bush. (16,192,502); live-stock, 32,960 head (41,588); logs and lumber, 189,455,000 ft. (171,636,000); firewood, 109,685 cords (175,675); fish, 3,402 tons (3,175); immigrants' effects, 4,647 cars (2,614); building materials, 9,046 cars (8,955); miscellaneous, 628,521 tons (559,022).

The summary of equipment shows the following, the figures in brackets being those for the year ended June 30, 1906: Locomotives, 190 (141); sleeping and dining cars, 29 (18); passenger coaches, 108 (77); baggage and mail and express cars, 48 (35); business cars, 6 (5); freight, refrigerator and stock cars, 6,868 (5,437); conductors' vans, 97 (69); boarding, tool, auxiliary cars, steam shovels and snow equipment, 123 (83).

MILEAGE OWNED AND OPERATED.—The total number of miles of railway owned and operated, including leased lines, was 2,639.4 miles, located as follows: Ontario, 353.7 miles; Minnesota, U.S., 43.7 miles; Manitoba, 1,427.2 miles; Saskatchewan, 600.6 miles; Alberta, 214.2 miles. This mileage is operated in four districts: Lake Superior, 578.2 miles; Central, 498.7 miles; Northern, 961.9 miles; Western, 600.6 miles. The average mileage operated for the fiscal year was 2,509 miles.

The report was unanimously adopted at the annual meeting and the directors re-elected. Following are the directors for the current year: President, W. Mackenzie; Vice-President, D. D. Mann; other directors, Z. A. Lash, F. Nicholls, Toronto; R. M. Horne-Payne, London, Eng.

The La Tuque branch of the Quebec and Lake St. John Ry. was opened for traffic Nov. 18.

The C.P.R. has entered into an agreement with the Pacific Cartage Co. for the cartage of freight to and from the freight sheds at Calgary, Alta.

The C.P.R. has announced that it will offer two scholarships in the railway department of McGill University, for competition among sons of its employes, at the matriculation examinations in June, 1908.

The Board of Railway Commissioners has approved of the tariff of tolls for freight upon the G.T. Pacific Ry. between Portage la Prairie and Rae, Man., about 130 miles. The rates are approximately the same as those charged by other railways in Manitoba.

The Dominion Government fisheries protection cruiser Lurline, recently purchased from J. H. Walker, Walkerville, Ont., on her way to Georgian Bay ports, ran on the partially constructed breakwater at the mouth of Goderich harbor, Oct. 26. Attempts were made to get her off, but without success, and it was decided to remove the fittings and abandon her. She, however, broke up during the night.

Investigation of G.T.R. Facilities.

Order 3618 passed by the Board of Railway Commissioners Sept. 21, recites that numerous complaints have been received by the Board respecting the G.T.R. Co., and orders: "That A. F. Dillinger, Operating Assistant to the Chief Traffic Officer of the Board, be directed to make inquiry and report to the Board—

"Whether the G.T.R. Co. has, at any time within the period of 12 months next preceding the issue of this Order, failed, and whether the said company does now or at any time up to the making of A. F. Dillinger's final report, fail to furnish at any place or places of starting on its railway, or at the junction or junctions of its railway with any other railway or railways, or at any stopping place or places established for such purpose, adequate and suitable accommodation for the receiving and loading of all traffic offered for carriage upon its railway; or to furnish adequate and suitable accommodation for the carrying, unloading, and delivering of all such traffic; or without delay, and with due care and diligence, to receive, carry, and deliver all such traffic; or to furnish and use all proper appliances, accommodation, and means necessary for receiving, loading, carrying, unloading, and delivering such traffic.

"In what particulars the company has so failed or does fail, as aforesaid, and to what causes any such failure has been or is due.

"Whether the company is possessed of all proper appliances, accommodation, and means necessary for receiving, loading, carrying, unloading, and delivering the traffic which will probably be offered immediately or within the two years next succeeding the issue of this Order, at all places of starting on its railway, at all junctions of its railway with other railways, and at all stopping places established by it for such purpose, for carriage upon its railway, and, if not, in what particular respects the said company is not possessed of any such appliances, accommodation, or means.

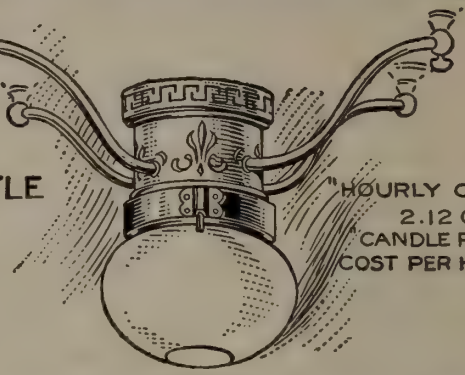
"If the company is not possessed of all proper appliances, accommodation, and means necessary as aforesaid, what preparation the company has made, and what steps it has taken to furnish itself with the same, and whether such preparation and steps are adequate and sufficient for the purpose of furnishing to the said company all further proper appliances, accommodation, and means necessary as aforesaid in respect of which its supply is now defective, and, if not, whether it is within the power of the company to obtain the same within a reasonable time, and if so, within what time.

"In the event of the company having failed, or failing, as aforesaid, or of its being furnished with all proper appliances, accommodation, and means necessary as aforesaid, whether any, and if so what, specific works should be constructed or carried out, or property acquired, or what property, cars, motive power or other equipment should be acquired, or what steps, systems, or methods should be taken or followed by the company so as to enable it, without delay, and with due care and diligence to receive, carry, and deliver all traffic offered for carriage upon its railway.

"What is or would be the effect upon the power of the company to receive, carry, or deliver traffic, without delay, or compliance with the provisions of the Lord's Day Act.

"And the Board further orders that A. F. Dillinger report from time to time to the Board upon any of the matters aforesaid, as he may think desirable or as may be directed by the Board."

PINTSCH LIGHT



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Orders by the Railway Commissioners.

3788. Oct. 16.—Approving revised location of C.P.R. from Eburne to New Westminster, B.C.

3789. Oct. 16—Approving revised location of C.P.R. spur at mileage 103.18 Toronto-Sudbury Branch, and authorizing it to cross by a standard tunnel under the C.N.O.R. tracks, near Foote's Bay station.

3790 to 3792. Oct. 15—Authorizing the James Bay Ry. Co. to construct its line across Main, Simcoe and Victoria Sts., Beaverton, Ont., and across road in Thorah tp., Ont.

3793, 3794. Oct. 17—Authorizing Quebec, Montreal and Southern Ry. to construct its line across highways in St. Thomas de Pierreville and Nicolet parishes, Que.

3795. Oct. 18—Authorizing J. Motheral, of Drumbo, Ont., to lay a water pipe under G.T.R. tracks in Blenheim tp., Ont.

3796. Oct. 21—Authorizing C.P.R. to construct a spur from the Molson cut-off line to the Bird's Hill Sand Co.'s premises, near Winnipeg.

3797. Oct. 21—Authorizing C.P.R. to construct two spurs at Craighurst, Ont.

3798. Oct. 21—Authorizing C.P.R. to construct a spur in Didsbury, Alta., to M. Weber's premises.

3799. Oct. 21—Authorizing Kaministikwia Power Co. to cross C.P.R. with power wires about a mile east of Fort William, Ont.

3800. Oct. 21—Authorizing C.P.R. to construct a spur at Markinch, Sask., to Hotn Bros. premises.

3801. Oct. 21—Approving location of C.N.R. through n.e. ¼ sec. 16, e. ½ sec. 21, and s.e. ¼ sec. 28, tp. 10, r. 26, west prin. mer., Manitoba.

3802. Oct. 21—Authorizing City of Port Arthur to lay a water pipe under the C.P.R. and C.N.R. tracks on Manitou St.

3803 to 3805. Oct. 19—Authorizing Bell Tel. Co. to place wires across C.P.R. tracks at public crossing, one mile south of Tillsonburg station, Ont., and across C.N.R. tracks near Myrtle, Man.

3806. Oct. 22—Authorizing Kneister Telephone Co. to place its wires across M.C.R. tracks at Main St., Comber, Ont.

3807 to 3814. Oct. 23—Authorizing Kettle River Valley Ry. to construct its line across various streets in Grand Forks, B.C.

3815. Oct. 22—Authorizing Quebec, Montreal & Southern Ry. to connect its track with G.T.R. track, near St. Constant, Que.

3816. Oct. 22—Authorizing the Napierville Jct. Ry. to connect its track with C.P.R. track, near St. Constant, Que.

3817. Oct. 22.—Authorizing Walkerton & Lucknow Ry. to connect its track with C.P.R. tracks in Artemesia tp., Ont.

3818. Oct. 21—Authorizing Town of Pembroke, Ont., to lay water pipes under C.P.R. tracks.

3819. Oct. 4—Amending order 2952, of May 18, authorizing Toronto Electric Light Co. to cross C.P.R. and C.N.R. tracks.

3820. Oct. 17—Approving location of C.P.R. new passenger station at Treherne, Man.

3821 to 3823. Oct. 23—Approving revised location of C.P.R. at crossings of the Grand, Aroostook and St. John Rivers, N.B.

3824. Oct. 23—Authorizing G.T. Pacific Ry. to carry its lines across C.P.R. Souris Branch tracks in Headingly parish, Man.

3825. Oct. 23—Authorizing C.P.R. to reconstruct bridges over Chambly Basin, Que.

3826. Oct. 23—Authorizing C.P.R. to reconstruct bridge over Aroostook River, N.B.

3827. Oct. 23—Authorizing City of Sherbrooke, Que., to lay water pipe under G.T.R. tracks..

3828. Oct. 23—Authorizing G.T.R. to construct a farm crossing on S. B. Carew's farm, Emily tp., Ont.

3829. Oct. 24—Authorizing C.P.R. to construct the spurs at Cache Bay, Ont., for Gordon & Sons.

3830. Oct. 23—Approving revised location of G.T. Pacific Ry. in St. Francois Xavier parish, Man.

3831. Oct. 23—Approving of G.T. Pacific Ry. freight traffic forms.

3832. Oct. 24 — Approving C.P.R. revised location in West Zorra tp. and Embro, Ont.

3833. Oct. 24—Authorizing C.P.R. Co. to construct its line in Embro, Ont., across certain road allowances and streets; and to close a street and lane.

3834. Oct. 24—Approving location of Chatham, Wallaceburg & Lake Erie Ry. Co., from Chatham to Lake Erie, Ont.

3835, 3836. Oct. 24—Authorizing Scarboro' Telephone Co. to place its wires across C.P.R. tracks in Scarboro' tp., Ont.

3837. Oct. 24—Authorizing Atlantic, Quebec & Western Ry. to open for traffic its line between mileage 17½ and 20, second section of its Shore Line.

3838. Oct. 24—Authorizing Provincial Natural Gas & Fuel Co. to lay a main under G.T.R. tracks in Bertie tp , Ont.

3839. Oct. 24—Authorizing the St. Catharines, Ont., City Water Commissioners to lay a main under G.T.R. tracks.

3840. Oct. 5—Authorizing Mrs. E. Witters to lay a water pipe under C.P.R. tracks in Shelburne, Ont.

3841. Oct. 24—Authorizing the Danville, Que., Water, Light & Power Co. to lay a water main under G.T.R. tracks.

3842. Oct. 24—Amending order 2897, of April 2, authorizing the Vancouver, Westminster and Yukon Ry. to cross the C.P.R. track near 14th St., New Westminster, B.C., by adding thereto the following clause, viz.: "That the trains of the applicant company, when approaching the said crossing, be under control, and do not cross the same at a speed greater than six miles an hour."

3843 to 3848. Oct. 24—Authorizing Bell Tel. Co. to place its wires across G.T.R. tracks at various points.

3849. Oct. 24—Amending order 1893, authorizing the Innerkip Rural Telephone Association, Ltd., to place its wires across C.P.R. tracks at Innerkip, Ont.

3850, 3851. Oct. 21—Authorizing the Toronto & Niagara Power Co. to place its wires across Toronto, Hamilton & Buffalo Ry. tracks at the escarpment at Vinemount, at Stoney Creek, west of Bronte, Ont., and at Davenport Road, Toronto.

3852, 3853. Oct. 26—Authorizing Bell Telephone Co. to place its wires across the C.P.R. tracks 3½ miles north-east of St. Thomas station, Ont., and on Government Wharf at Three Rivers, Que.

3854. Oct. 24—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks ¼ of a mile east of Tara station, Ont.

3855. Oct. 26—Authorizing Brandon, Saskatchewan & Hudson Bay Ry. Co. to carry its railway across 13th, 15th, 18th, 20th, 26th and 34th Sts., Brandon, Man.

3856. Oct. 26—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks at Rectory St., London, Ont.

3857. Oct. 26.—Authorizing the C.P.R to construct a spur line at Fernie, B.C., to the Fort Steele Brewing Co.'s premises.

3858. Oct. 22—Authorizing the C.P.R. to construct a branch line in the parish of St. Sauveur, Que., to the Frontenac Gas Co.'s premises.

3859. Oct. 26—Authorizing the C.P.R. to reconstruct six bridges in New Brunswick.

3860. Nov. 2—Authorizing the G.T.R. to construct a branch line from its Cote St. Paul branch, Cote St. Paul, Que., through Montreal and Lachine parishes, to the River St. Lawrence, also a spur to the Montreal Water Works settling basin.

3861. Oct. 11—Authorizing the Quebec, Montreal & Southern Ry. to construct 12 bridges over rivers in the Province of Quebec.

3862. Oct. 21—Authorizing the C.P.R. to construct bridges over the Yamaska River, and a bridge on its Broadview section, Central Division.

3863. Oct. 30—Authorizing the C.P.R. to open for traffic the second track of its main line between Ft. William and Winnipeg, extending from Rennie to Whitemouth, mileage 51.8 to 71.7 from Kenora.

3864. Oct. 30—Approving revised location of G.T. Pacific Ry. through unsurveyed territory, from Hardisty Creek to Rocky River, Alberta, mileage 60 to 90, etc.

3865. Oct. 30—Approving revised location of Canadian Northern Ry. through tps. 42 and 43, r. 5, west of 3rd mer., mileage 20.08 to 28, Saskatchewan.

3866. Oct. 30—Amending order 2891, of Feb. 8, granting leave to the Kaministikwia Power Co. to cross the C.P.R. opposite the Ogilvie flour mills and elevator in Fort William, Ont.

3867. Nov. 4—Authorizing C.P.R. to cross Toronto Ry. tracks on Queen St., Toronto.

3868. Nov. 11—Authorizing C.P.R. to construct and operate spurs to R. Bigley's and the Dominion Bridge Co.'s premises in Toronto.

3869. Nov. 11—Authorizing Canadian Northern Ontario Ry. to open for traffic its line from the end of the Canadian Northern Quebec Ry. track at Hawkesbury, Ont., to near the west limit of the town of Hawkesbury.

3870. Nov. 11—Authorizing the C.P.R. to open for traffic the portion of its second track of main line between Ft. William and Winnipeg, mileage 79.7 to 84 in Manitoba.

3871. Nov. 11—Authorizing the C.P.R. to construct tracks across certain streets in Regina, Sask.

3872. Nov. 11—Authorizing the C.P.R. to construct a spur to the Ontario Nickel Co.'s premises, Drury tp., Ont.

3873. Nov. 11—Authorizing Canadian Northern Ontario Ry. to open for traffic its spur line in Hawkesbury, Ont , to the G.T.R. tracks in Riordan's mill yards.

3874. Nov. 11—Authorizing the C.P.R. to open for traffic the diversion of its line near Cummings, Medicine Hat section.

3875. Nov. 11—Authorizing the C.P.R. to open for traffic its line between Kincorth and Cummings, Medicine Hat section.

3876. Nov. 11—Authorizing the London Township Telephone Co. to place its wires across G.T.R. tracks near Denfield station, Ont.

3877. Nov. 11—Dismissing application of town of Claresholm, Alta., for an order directing the C.P.R. to construct a suitable highway where its railway intersects Third avenue.

3878. Nov. 11—Authorizing Blenheim and South Kent Telephone Co. to place its wires across Canada Southern Ry. tracks near Mull and Fargo stations.

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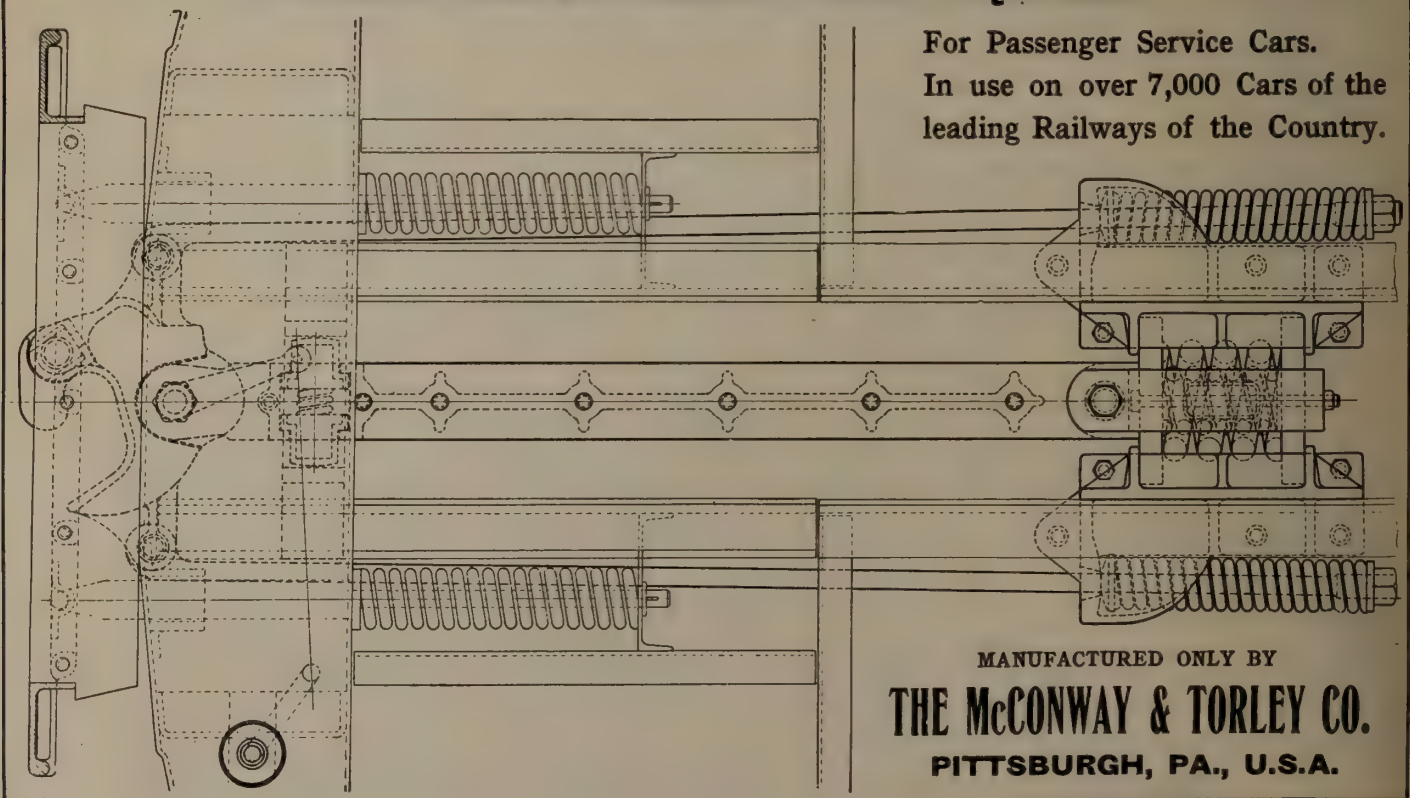

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3879. Nov. 11—Authorizing city of Peterborough, Ont., to lay a sewer pipe under the G.T.R. tracks.

3880. Nov. 11—Authorizing Brantford and Hamilton Electric Ry. to take those portions of lot belonging to E. Anderson and J. Hammond, of Ancaster tp., Ont.

3881. Nov. 11—Approving revised location of Canadian Northern Ry. through tps. 20-22, rgs. 26-29, west of prin. mer., Manitoba, mileage 90.75 to 115.73.

3882. Nov. 11 — Authorizing London Township Telephone Co. to place its wires across G.T.R. tracks near Lucan station, Ont.

3883. Nov. 1—Extending to Mar. 1, 1908, the time for filing and approval of Bell Telephone Co.'s tariffs of tolls.

3884. Nov. 1—Extending time for filing and approval of Canadian and Dominion Express Co.'s tariffs of tolls until Mar. 1, 1908.

3885. Nov. 11—Authorizing Midland Ry. of Manitoba to operate trains across C.P.R. tracks at Morden, Man., for construction purposes, until installation of interlocking plant.

3886. Nov. 11—Authorizing C.P.R. to construct a bridge over Waubeek St., Parry Sound, Ont.

3887. Nov. 1—Extending time for the filing and approval of Express Traffic Association's tariffs of tolls to Mar. 1, 1908.

3888. Nov. 11—Authorizing Blenheim and South Kent Telephone Co. to place its wires across Pere Marquette Rd. tracks near Blenheim, Wilkie and Blenheim West stations.

3889. Nov. 12—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks near Lawrence station, Ont.

3890. Nov. 12—Authorizing Guelph and Goderich Ry. to construct a bridge over Raccoon Creek, on its Listowel branch.

3891. Nov. 12—Authorizing Bell Telephone Co. to place its wires over G.T.R. tracks at Hensall, Ont.

3892. Nov. 12—Authorizing C.P.R. to operate its trains over the crossing of the G.T.R. in Milton, Ont., without being brought to a stop.

3893. Nov. 1—Extending time for filing and approval of North American Telegraph Co.'s tariffs of tolls to Mar. 1, 1908.

3894 to 3898. Nov. 5—Authorizing Bell Telephone Co. to place its wires across the Michigan Central Rd. and G.T.R. tracks at various places.

3899. Nov. 2—Authorizing Okotoks Electric Co. to place its wires over the Calgary and Edmonton Ry. at Okotoks, Alta.

3900. Nov. 2 — Authorizing Ingersoll Electric Light and Power Co. to re-erect five wires across C.P.R. Co.'s Port Burwell branch in town of Ingersoll, Ont.

3901. Nov. 5—Authorizing Knight Sugar Co. to erect electric light wires across Alberta Ry. and Irrigation Co.'s tracks at Raymond, Alta.

3902. Nov. 2—Authorizing London County Telephone Co. to place its wires across G.T.R. tracks near Ilderton station, Ont.

3903, 3904. Nov. 2—Authorizing Ingersoll Electric Light and Power Co. to re-erect three wires across C.P.R. siding, and three wires across C.P.R. Ingersoll branch in Ingersoll, Ont.

3905. Nov. 4 — Authorizing Manufacturers' Natural Gas Co. to lay a main under Toronto, Hamilton and Buffalo Ry. tracks in Hamilton, Ont.

3906. Nov. 4—Authorizing C.P.R. to construct a spur to the Nipissing Planing Mills Co.'s premises, Widdifield tp., Ont.

3907. Nov. 4—Authorizing C.P.R. Co. to construct a spur to the Moose Jaw Brewing and Malting Co.'s premises, Moose Jaw, Sask.

3908. Nov. 4—Authorizing the G.T.R. to construct bridge over the Huron River near Ste. Madeline, Que.

3909. Nov. 4—Authorizing C.P.R. to construct a bridge over Bras Est River, on its Nomining section.

3910. Nov. 4—Authorizing C.P.R. Co. to open for traffic the portion of its second track between Ft. William and Winnipeg, extending from Kaministikwia and Sunshine, mileage 23 to 28.8.

3911 to 3914. Nov. 5—Authorizing Bell Telephone Co, to place its wires across Michigan Central Rd. tracks at various points.

3915. Nov. 12—Authorizing Bell Telephone Co. to place its wires across G.T.R. tracks near Stevensville station, Ont.

December Birthdays.

Many happy returns of the day to—

A. H. Anderson, Cashier, Paymaster and Purchasing Agent, Quebec Central Ry., Sherbrooke, Que., born at Cookshire, Que., Dec. 19, 1859.

J. H. Barber, Engineering Department C.P.R., Montreal, Que., born at Cobourg, Ont., Dec. 20, 1856.

N. E. Brooks, C.P.R. Division Engineer, Calgary, Alta., born at Sherbrooke, Que., Dec. 25, 1866.

J. C. M. Buntzen, Managing Director British Columbia Electric Ry. Co., London, Eng., born at Copenhagen, Denmark, Dec. 16, 1859.

T. C. Burpee, Engineer of Maintenance of Way. Intercolonial Ry., Moncton, born at Sheffield, N.B., Dec. 11, 1852.

W. W. Butler, 1st Vice-President Dominion Car and Foundry Co., Ltd., born at Danville, Ohio, Dec. 9, 1862.

Capt. G. C. Coles, of F. W. Churchill & Co., C.P.R. Ticket Agents, Collingwood, Ont., born at Biddlestone Rectory, Wiltshire, Eng., Dec. 15, 1859.

P. E. Demers, Trainmaster Central Vermont Ry., Farnham, Que., born there Dec. 10, 1859.

W. N. Dietrich, Electrical Engineer C.P.R., Montreal, born at Perth, Ont., Dec. 23, 1872.

J. W. Donald, District Passenger Agent, Chicago and Alton Rd., Detroit, Mich., born at St. John, N.B., Dec. 22, 1857.

H. P. Dwight, President Great Northwestern Telegraph Co., Toronto, born at Belville, Jefferson Co., N.Y., Dec. 23, 1828.

R. Forget, M.P., President Richelieu and Ontario Navigation Co., Montreal, born at Terrebonne, Que., Dec. 10, 1861.

H. H. Gildersleeve, Manager Northern Navigation Co. of Ontario, Collingwood, born at Kingston, Ont., Dec. 15, 1865.

A. J. Gorrie, General Superintendent Canadian Northern Quebec Ry., Montreal, born at Raith, Kirkcaldy, Scotland, Dec. 10, 1868.

D. B. Hanna, President Quebec and Lake St. John Ry., Third Vice-President Canadian Northern Ry., Toronto, born at Thornliebank, Scotland, Dec. 20, 1858.

S P. Howard, General Freight Agent Eastern and Lake Superior Divisions C.P.R., Montreal, born there Dec. 30, 1865.

R. R. Jamieson, General Superintendent Western Division C.P.R., Calgary, Alta., born at Westover, Ont., Dec. 12, 1856.

B. B. Kelliher, Chief Engineer Grand Trunk Pacific Ry., Montreal, born in Ireland, Dec. 26, 1862.

W. Kennedy, Superintendent of Motive Power, Central Vermont Ry., St. Albans, Vt., born at Belleville, Ont., Dec. 23, 1869.

L. Macdonald, Division Freight Agent G.T.R., Toronto, born at Montreal, Dec 10, 1871.

J. T. McGrath, Master Mechanic G.T.R., Fort Gratiot, Mich., born at Toronto, Dec. 6, 1869.

L. McLean, Superintendent Sydney and Louisburg Ry., Glace Bay, N.S., born there, Dec. 10, 1867.

J. Niblock, Superintendent C.P.R., Calgary, Alta., born in York county, Ont., Dec. 21, 1849.

A. Price, General Superintendent Central Division, C.P.R., Winnipeg, born at Toronto, Dec. 6, 1861.

C. Schrieber, C.M.G., Consulting Engineer Department of Railways and Canals, Ottawa, Ont., born at Bradwell, Essex, Eng., Dec. 14, 1831.

F. P. Smith, Secretary Richelieu and Ontario Navigation Co., Montreal, born there, Dec. 23, 1873.

C. E. E. Ussher, Assistant Passenger Traffic Manager, C.P.R. Western Lines, Winnipeg, Man., born at Niagara Falls, Ont., Dec. 29, 1857.

H. H. Vaughan, Assistant to Vice-President C.P.R., Montreal, born at Forest Hill, Essex, England, Dec. 26, 1868.

W. Wood locomotive foreman, C.P.R., Megantic, Que., born at Montreal, Dec. 6, 1863.

C.P.R. Directors' Inspection Trip.

Sir T. G. Shaughnessy, President C.P.R., returned to Montreal Oct. 24, having completed his annual trip of inspection over the railway. Sir Thomas, accompanied by R. B. Angus, one of the directors, left Montreal Oct. 5 on a special train, and was joined at North Bay by E. B. Osler, M.P., and W. D. Matthews, two other directors resident in Toronto. The party was joined at Fort William by W. Whyte, Second Vice-President, and G. J. Bury, Assistant General Manager Western Lines. The whole of the main line and the terminal facilities were given a thorough inspection, and the new work in progress at the different points was gone over. In an interview at Montreal on his return Sir Thomas said the physical condition of the line from the Atlantic to the Pacific was excellent. With regard to the report of the contemplated acquirement of the Spokane International Ry., the matter, he said, was in the hands of the Soo people. It was not true that he had visited Spokane, as had been stated in press despatches. The talked of extension from Edmonton through the Yellow Head Pass also had never seriously been considered by the C.P.R., and nothing was being done in this connection at the present time, reports from the west to the contrary notwithstanding.

The Grand Jury at the recent Court of General Sessions in Toronto in their presentment expressed regret that they were unable to indict the civic officials whose duty it was to carry out the orders of the Railway Commissioners, as well as the railways, for the Bay St. crossing accident of May 24.

The C.P.R. is receiving a supply of water at the rate of 2,500,000 galls. a day at Winnipeg, with the completion of the first unit of the civic high pressure system. The company has had its own main from the high pressure plant, and has made all the necessary fittings. It pays 6½c. a thousand galls. for the water.

The American Railway Association's committee on car efficiency, report car surpluses and shortages as follows on Oct. 16 and 30: United States and Canada, Oct. 16, surpluses 4,258, shortages 85,764; Oct. 30, surpluses 3,946, shortages 90,757. Canadian lines alone, Oct. 16, surpluses 0, shortages, 5,452; Oct. 30, surpluses 43, shortages 8,091.

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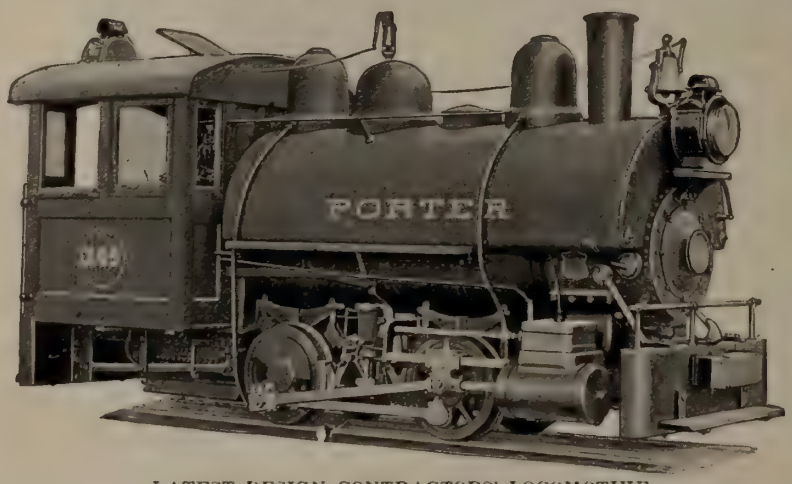

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Algoma Central and Hudson Bay Ry.—The Superior Copper Co., Sault Ste. Marie, Mich., is constructing a three mile spur from Superior Mine station, mileage 38.4, to its mining property. Reports state that owing to the assignment, Nov. 5, of F. Perry, who is the largest stockholder in the Superior Copper Co., the work of construction will be suspended temporarily. (Sept., pg. 663).

Atlantic, Quebec and Western Ry.—About 500 men are engaged in the construction of the extension of this line from Port Daniel to Gaspe, Que. There is considerable difficulty, however, in getting a sufficient number of men on the work and the completion of the hundred miles from Paspebiac to Gaspe is not expected for a couple of years. C. B. K. Carpenter, Managing Director of the English construction company which is carrying out the work, has been inspecting the work done. (Oct., pg. 741).

Crow's Nest Southern Ry.—The extension under construction from Fernie to Michel, B.C., is 23 miles long. A recent report from Fernie stated that 51 cars of plant had been delivered and 200 men were at work upon the right-of-way. Another report states that it is intended to construct a line running northerly from Michel, through the valley of the Elk River, and Kanakas Pass to Calgary, Alta. (Nov., pg. 829).

Rapid progress is being made with construction on the extension from Fernie to Michel. At a point six miles from Fernie a new channel has been cut for the Elk River, and the old channel used as a roadbed, thus saving the necessity for two bridges. There are four crossings of the river on the line. Ties and rails are on hand for 20 miles of track, and this work will be proceeded with as fast as possible.

Erie, London and Tillsonburg Ry.—The Dominion Parliament will be asked at its current session for an act extending the time for the commencement and completion of the proposed line, and for other purposes. Dowler & Sinclair, Tillsonburg, Ont., are solicitors for the applicants.

Great Northern Ry. (U.S.) Lines in Canada.—Winnipeg press reports state that it is unlikely that anything will be done for some considerable time in the way of constructing terminals for this company in that city. Meantime the land purchased for terminal purposes and for a right-of-way into the city is lying idle.

The company has arranged to give up certain fore shore rights at Vancouver in order that the dredging which the city purposes to carry out at False Creek at a cost of $1,000,000 can be gone on with. (Nov., pg. 829).

Tracklaying is being proceeded with on the extension of the branch terminating at Walhalla, Minn., to Morden, Man., and it is expected to have a train service in operation early in Dec. The line is being constructed under the charter of the Midland Ry. of Manitoba.

Hudson's Bay-Pacific Ry.—The London, Eng., correspondent of an Edinburgh, Scotland, paper says the possibilities of the Hudson Bay route are attracting a great deal of attention, and a group of London financiers is understood to have a scheme in view to test the feasibility of the strait and bay route as a commercial outlet to Europe. The prospective port on Hudson Bay is Fort Churchill, and it is to that point that this and other railway companies planning railways to connect existing lines in Canada with Hudson Bay are being surveyed. (Nov., pg. 829).

Intercolonial Ry.—Tenders are under consideration for the construction of the following buildings: Sand house at Chaudiere Jct., Que.; car cleaners' building, Riviere du Loup, Que.; brick oil house, car inspectors' building, switchman's shanty and car cleaners' building, Ste. Flavie, Que.; coaling pockets and sand house, Campbellton, N.B.; coaling pockets, Newcastle, N.B.; car cleaners' building, coaling pockets and sand house, St. John, N.B.; car cleaners' building, Moncton, N.B.; car cleaners' building, Pictou, N.S.; sand house, Stellarton, N.S.; diversion of Leper Brook, bridge masonry, sand house and car cleaners' building, Truro, N.S.; 80,000 gal. water tank, sand house, car cleaners' building, fitters' and carpenters, shop and store building at Halifax, N.S.

The men employed on the second track work between Moncton and Painsec Junction, N.B., have given up work owing to their wages being in arrear, and it was reported that the contractors, J. B. MacManus Co., Limited, intended abandoning the work. The wet summer and the increased cost of labor, etc., is said to have interfered with the carrying out of the work, and to have cost the contractors a lot of money.

The freight shed at Campbellton, N.B., was destroyed by fire, together with its contents, Nov. 1, the total loss being put at $30,000. (Oct., pg. 741).

International Ry. of New Brunswick.—Tracklaying is reported to be in progress at the St. Leonard's end of the line, and grading is going on from both ends. About 600 men are reported to be at work on the line. (Sept., pg. 663).

Interprovincial Ry. Bridge Co. of New Brunswick.—Application will be made next session of the Dominion Parliament for an act amending the act of incorporation of 1904, so as to extend the time for the commencement and completion of the bridge and other works authorized to be constructed. J. McAlister, Campbellton, N.B., is solicitor for the applicants. The company was incorporated in 1904, and a proposal was made to the Dominion and Provincial Governments with a view of obtaining subsidies towards the cost of construction of a combined railway and traffic bridge. Nothing, however, has been done in the way of construction. The proposed bridge will be 3,300 ft. long, in addition to the approaches, and will cross the Restigouche River at Campbellton. There will be 16 piers and abutments, which will be of concrete, the superstructure being of steel. The bridge when constructed will connect the Atlantic, Quebec and Western Ry. (originally the Baie des Chaleur Ry., and latterly operated as the Atlantic and Lake Superior Ry.), and the International Ry. of New Brunswick. Three sites have been examined by a committee of engineers, and a report will be made to the Department of Railways at an early date. (Nov., pg. 829).

Kent Northern Ry.—The season's work on the roadbed has been completed, and the line is reported to be in an excellent condition. A large number of new ties have been put in, and much ballasting done. The roundhouse at Richibucto, N.B., has been given a general overhaul.

Little Nation Ry.—A meeting of shareholders was held at St. Andre Avelin, Que., Nov. 7, when directors were elected, and preliminary steps authorized with a view to the construction of the projected line. J. P. Belanger is President, and J. A. Gadoury, Secretary of the company, and its offices are at Cheneville, Que. (Aug., pg. 561).

Minnesota and International Ry.—A regular train service is being operated to International Falls, Minn., opposite Fort Frances, Ont. The work of ballasting and otherwise completing the line is being gone on with rapidly. (Nov., pg. 829).

Moncton and Buctouche Ry.—G. Brown, C.E., and T. M. Burns, M.L.A., the commissioners appointed by the New Brunswick Government to inspect the branch railways in the province, went over the line Nov. 8. They found the line in good condition, and will make a lengthened report to the Government. The commissioners have been authorized to inspect all the branch lines in the province with a view to the Dominion Government being asked to take them over from the local companies.

Newfoundland Short Line.—H. C. Thomson, J. C. Bruce, and H. V. Mostyn, are engaged in making a survey across Newfoundland from the south-west arm of Green Bay, for a railway in connection with the project for a fast steamship line across the Atlantic ocean, with a connecting steamship line to Canada. The possibilities of Bonne Bay as the western terminus of the line are being investigated. (July, pg. 495).

The Pere Marquette Rd. Co. is considering plans for the enlargement of its yards in London, Ont. The proposal includes the construction of a large roundhouse in the southern part of the city, and the throwing of the site of the present one into the yards. (July, pg. 481).

Prince Edward Island Ry.—Tenders are under consideration for the erection of an 80,000 gal. water tank and a pipe house at Charlottetown. (Aug., pg. 563).

Saskatoon, Saskatchewan, Peace River and Dawson Ry.—A U.S. press report says this enterprise is backed by U.S. capital, and that work will be started as soon as the charter is granted by Parliament. The present plans include the obtaining of running rights over the Canadian Northern Ry. from Winnipeg to Langham, Sask., at which point construction of the new line would start. (Nov., pg. 831).

Temiskaming and Northern Ontario Ry.—The commissioners have decided that tracklaying and other work, usually suspended at the beginning of Dec., will be carried on this year as long as possible. The building of a new station and a spur line at the south end of Haileybury, Ont., are under consideration.

Vancouver Island and Eastern Ry.—The Dominion Parliament will be asked at its current session to pass an act incorporating a company with this title to construct a railway from Victoria to or near Seymour's Narrows, Vancouver Island, and from near Seymour's Narrows on the mainland of B.C., easterly through the Yellowhead or some other pass to Edmonton, Alta., with authority to establish a railway ferry service across Seymour's Narrows, and to construct the necessary wharves, docks, etc. It is also desired to have authority to develop electrical energy and to distribute the same within British Columbia and to effect junctions with any other line of railway. R. C. Lowe, Victoria, B.C., is solicitor for the applicants.

Winnipeg City Power Line—Tenders are under consideration for one second-hand, single track, through truss, steel railway bridge, 155 to 165 ft. single span. The bridge is required to carry a 10-wheel locomotive having a rigid wheel base of 14 ft. 10 in., and followed by a rolling load of 3,000 lbs. per lineal foot of track. C. B. Smith, the consulting engineer, has recommended the acceptance of the bulk tender of the Anglo-Canadian Engineering Co., of London, Eng., for the construction of the power plant, and the matter is under consideration. (Nov., pg. 831)

The council decided to accept the tender of the Anglo-Canadian Engineering Co., but the Mayor vetoed the proposition. In explanation of his stand the Mayor says that the council will secure legislation to enable it to place the city's bonds on the London, Eng., market, where a better price could be obtained than that offered by the contracting company.

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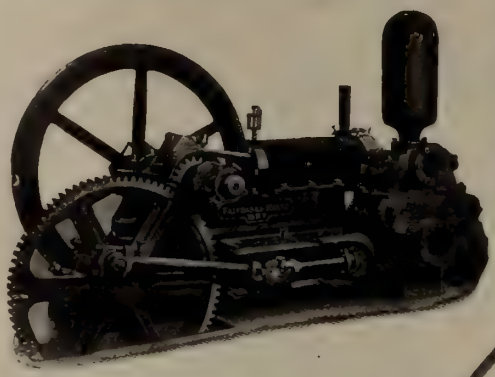

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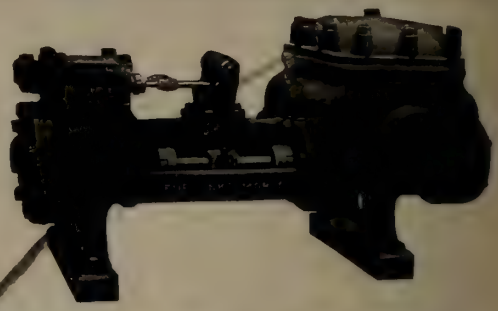

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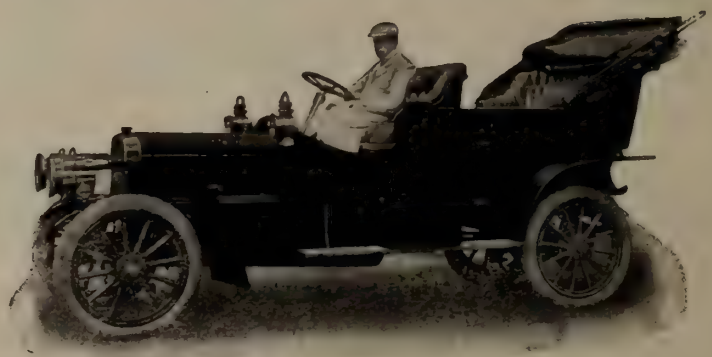

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Alberta Ry. and Irrigation Company.

Following is the 3rd annual report presented at the shareholders' meeting in London, Eng., Nov. 6:

The accounts for the year ended June 30, 1907, show the following:

REVENUE.

Balance from July 1, 1906		$37,495.35
Revenue from colliery, railways, canals, profit on land sales, etc.		247,435.37
		$284,930.72
Deduct interest on prior lien debenture stock	$44,673.44	
London expenses (including directors' fees, London and Canada)	16,855.31	
Interim payment of 2% on the 5% debenture stock made July 1, 1907	65,000.00	
Final payment of 3% on the 5% debenture stock made Oct. 21, 1907	97,500.00	
		224,028.75
Surplus		$60,901.97

The coal sales were 122,947 tons, against 199,824 tons for the previous year, the decrease of 76,877 tons being due to the strike, which ended in Dec. The gross earnings of the railway were $197,608.09, as compared with $182,796.51 for the previous year. During the year the land sales aggregated 213,845 acres and realized $1,114,776.45, the average price being about $5.21 an acre. The sales comprised 33,076 acres covered by the trust deed for debenture stockholders and 180,769 acres, formerly the property of the Canadian North-West Irrigation Co., and free from the trust. Of the lands sold, 2,228 acres were irrigable and 211,617 non-irrigable; the average price for irrigable lands being $18 an acre and for non-irrigable lands $5.08 an acre. The company also sold during last year 25,120 acres in which it has an interest with the C.P.R. Co., the company's proportion of profit on the 25,120 acres being equal to about $2.23 an acre. The estimated net profit resulting from all the above sales and from town lots sold during the year, amounts to $349,523.35, but only the profit received in cash from sales of lands free from the trust (after deducting all the commissions and land expenses for the year), viz., a net sum of $8,640.72, is included in the present revenue account, the balance being placed to reserve to be dealt with as the outstanding instalments are received. The total amount in reserve in connection with sales of the company's lands is now $609,792.58, and in connection with the sales of C.P.R. lands $166,552.00; total, $776,344.58. On June 30 last, the company had 548,347 acres remaining unsold. It also owns many lots in the city of Lethbridge and in the town of Raymond. The receipts for the year from water rentals were $18,969.78, against $16,062.87 for the previous year.

During the past year the company's business was very seriously affected by the miners' strike. Now that this is happily ended the coal sales should improve, as the demand for the company's coal exceeds the present supply, but the prevailing scarcity of labor renders it very difficult to increase and maintain the output at a satisfactory figure. The railway earnings, which were also adversely affected by the strike, should, with everything going smoothly, show a marked increase in the future. The land business for the past year, as shown by the figures given above, was very satisfactory. Since the end of June the company has completed further sales of considerable importance. The demand for lands wholly depends upon immigration and on the crops raised, and in both these particulars the results have been very gratifying. Since the C.P.R. has made Lethbridge a divisional point, the importance of the city has greatly increased. Notwithstanding the strike, which has deprived the common stock of any dividend for the past year, the directors consider the company's affairs to be in a most satisfactory condition. In accordance with the Railway Act of Canada, the directors retire from office, and offer themselves for re-election, viz.: E. T. Galt, Col. K. R. B. Wodehouse, A. M. Nanton, W. Burdett-Coutts, M.P., E. S. Clouston, J. H. Dodgson, J. Galt, W. M. Ramsay, and E. Waterhouse.

ASSETS.

PROPERTY ACCOUNT—			
Colliery, railw'ys, lands, canals, etc., as at June 30, 1906		$7,212,138.01	
Add expenditure on canal extension, colliery betterm'nts, etc., during the year		133,911.60	
		$7,346,049.61	
Less cost of land and amount realized from narrow gauge equipment sold during the year		909,775.89	
			$6,436,273.72
Stores on hand			70,902.39
Amounts owing to the company—			
For land		2,533,201.62	
Less mortgages sold with the company's guarantee..$120,448.16 C.P.R. land agency a/c..168,826.03		289,274.19	
		$2,243,927.43	
Sundry debtors		193,558.52	
			2,437,485.95
Cash in banks and offices			548,872.09
			$9,493,534.15

LIABILITIES

4% prior lien debenture stock	$1,038,975.00
5% debenture stock	3,250,000.00
Common stock	3,250,000.00
Dominion Government	533,373.97
Sundry creditors	397,164.69
Deposits on account land (agreements not yet completed)	89,273.94
Land suspense accounts	776,344.58

REVENUE ACCOUNT—			
Bal. at June 30, 1906	$144,725.35		
Less final payment of 3% on 5% debenture stock for the year ending June 30, 1906	97,500.00		
	$47,225.35		
Less direct'rs' fees for year ended June 30, 1906	9,730.00		
		$37,495.35	
Add balance of revenue account for the year		185,906.62	
		$223,401.97	
Less interim payment of 2% on the 5% debenture stock, declared May 27, 1907, and made on July 1, 1907		65,000.00	
			158,401.97
			$9,493,534.15

REVENUE ACCOUNT.

Net revenue from colliery, railways, canals, land sales, etc	$247,016.55
Interest, transfer fees, etc	418.82
	$247,435.37
To London expenses (including directors' fees, London and Canada)	$ 16,855.31
Interest on prior lien debenture stock	44,673.44
Balance carried to balance sheet	185,906.62
	$247,435.37

The President, E. T. Galt, in moving the adoption of the report, dealt with the principal balance sheet items, and said: On the debit side there is Dominion Government $533,373, which is owing to the purchase some years ago of 500,000 acres of land for $500,000, payable in 10 equal annual instalments with interest at 5% per annum. The next sundry creditors, $397,164, consists principally of debenture interest since paid and outstanding accounts and wages. Land suspense account, $776,344, is a profit account to be realized as purchasers of land pay their annual instalments. Everything above $4 an acre, the inventory price, has been taken as profit. The property account appears at $6,436,273. This account last year showed $7,212,000, the reduction having been caused by land sales principally. The $2,243,927 owing to the company is from purchasers of land, and payable in annual instalments with interest at 6% per annum. Revenue account, $247,435. But for the miners' strike the profit would have been not less than $375,000, this estimate being based up on last year's volume of business. The prosperity of the company depends upon immigration and good crops, and in both respects last year was a satisfactory year for us; in fact, the crops were better last year than they have ever been before. The yield was larger, and the price paid for the grain was higher. The interests on amounts owing by land purchasers now amounts to over $130,000 a year, which is equal to over 60% of our fixed charges on the interest we have to pay on our debenture stock, which is now about $200,000 a year. That leaves only $70,000 a year to be earned by the railway, colliery and other properties. The financial position of the company is in very satisfactory shape.

As to the present business of the company, owing to the scarcity of labor, the colliery output is only about 800 tons a day, while our maximum capacity is 1,400. The management hope to be able to raise the output to the maximum figure before Christmas, when we hope to have a ready sale for that quantity; in fact, we could sell more if we had it. In connection with the increase of our output, which is absolutely necessary for the best interests of the company, we are now testing our coal lands with a diamond drill, and so far the tests have been very satisfactory. We hope that we shall be in a position to commence the sinking of a new shaft by next spring. It will take a year or a year and a half to finish it, and the cost complete will be about $250,000. The principal labor difficulty we have to contend with is not the getting of ordinary labor, but the securing of skilled labor to operate our coal-cutting machines. We cannot get men who are already trained for that work; we have to educate new men to it, and it takes a lot of time, but we are increasing the output gradually. As the report shows, the land sales last year were very satisfactory, and I may say that between July 1 last and the end of October, according to advices which we have received by cable, we have sold 100,000 acres of additional land, which will bring in about $550,000 further—that is, in addition to the figures which appear in the printed account. I do not expect, however, that the sales will continue at this pace in the immediate future, because money has become very scarce in the United States, and it is from there that we derive our settlers. I do not think that the sales of land will be so active until things improve a bit. The net profits of the company, exclusive of land sales, from July 1 to October 31, are estimated at $116,660—that is exclusive of land sales for four months. That is at the rate of $448,000 a year, exclusive of land sales. If that goes on, as we have every reason to believe and expect it will, we will hope to place the shares of the company on a dividend paying basis this time next year, or before that time. I have very little doubt about that at all. On the whole, I think the position of the company may be regarded as being very satisfactory.

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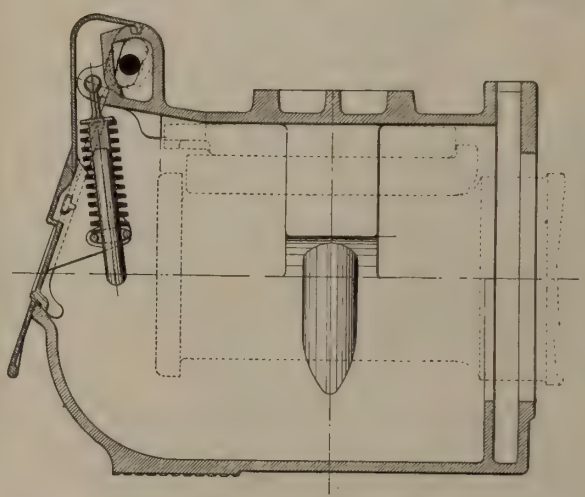

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sonal ideas with regard to the value of the capital investment of the company based upon the present conditions. We will take first of all the land part of the business of the company. We have mortgages, or rather amounts due by purchasers of land, to the extent of $2,250,000. We have 50,000 acres of irrigable land saleable at, say, $20. That is our minimum selling price for irrigable land; in fact, we are getting far more than $20 at present. That would make $1,000,000. Then we have 500,000 acres of farm lands, which we have put down at our minimum selling price of $5 an acre. That is $2,500,000; and then we have a great variety and an immense number of town lots in Lethbridge and other towns, besides property adjoining Lethbridge, which is most valuable. That property, together with our interest in the C.P.R. lands, we put down as being worth perhaps $450,000. The items that I have mentioned will sum up approximately to $6,200,000, against a debenture interest outstanding—prior liens and 5% of $4,250,000. That would leave a surplus from our land assets only of approximately $2,000,000, besides our railways, colliery, coal lands, canal system, and last, but not least, our irrigation franchises, to represent our share capital outstanding, which is $3,250,000. I am not going to place a specific value on those assets; I am merely going to say that beyond all question they are worth far more than the par value of our stock which is outstanding. More than that, I may say that in so far as our capital investment is concerned, it is an improving property, both as regards capital value and also as regards revenue. In making these estimates I have assumed that our cash liabilities in the accounts before you are offset by our bank balances, liquid inventories and things of that kind. I do not think I am very far astray in making that computation. Before concluding my remarks I wish to refer to the death of Alex. Young, which has occurred since we last met, and to say how much the original proprietors owe to that gentleman for having been instrumental in reorganizing the affairs of the company some years ago, when it was a question of life or death to our interests. I take pleasure in testifying to the valuable services rendered by Mr. Naismith, general manager, and by our colliery superintendent, Mr. Hardie, during the miners' strike. On the other hand, I regret to have to say that we have lost the services of our land commissioner, Mr. Magrath, who has resigned his position. He has been in charge of the company's lands and irrigation since 1885, and to judge by present results his management has proved very satisfactory.

The directors were re-elected, the composition of the board for the current year being as follows: President, E. T. Galt, Montreal; Vice-President, Col. K. R. B. Wodehouse, London, Eng.; Managing Director, A. M. Nanton, Winnipeg; other directors: W. Burdett-Coutts, J. H. Dodgson, E. Waterhouse, London, Eng.; E. S. Clouston, W. M. Ramsay, Montreal; J. Galt, Winnipeg.

Quebec and Lake Huron Ry. Promotion.

An action has recently been tried in London, Eng., in which Viscount Frankfort de Montmorency claimed to recover £200 from J. F. W. B. Taylor, a financier. The plaintiff's counsel stated that his client's services were desired in connection with the Quebec and Lake Huron Construction Co. It seemed to have been suggested that the plaintiff should become a director of the company and apply for 250 shares as a qualification. Plaintiff agreed and gave Taylor a cheque for £200 in respect of deferred shares. The £250 for qualifying shares was repaid to the plaintiff when the company failed to be formed. Plaintiff said he paid £200 for deferred shares, but never got them. For the defence, it was said defendant was to have one-third of 8,000 of the deferred shares, and plaintiff was to participate to the extent of a half, and if the scheme did not go through the £200 would be lost. Defendant said it was arranged that plaintiff should go to Canada to assist in obtaining subsidies, as the crux of the whole thing was that to be made attractive to the English public the subsidies should be confirmed by the Dominion Government. He had seen Sir Wilfrid Laurier on the matter; but, like other Prime Ministers, when you get to close quarters, he was very wary as to what he said. Justice Darling, in delivering judgment, said it seemed to him it was something in the nature of a gamble. There must be judgment for the defendant.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-07, from July 1, 1907:

	Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July..	$1,024,300	$ 662,300	$ 362,000	$420,500+
Aug..	835,600	619,200	216,400	240,700+
Sept..	758,300	549,200	209,100	133,900+
	$2,618,200	$1,830,700	$ 787,500	$ 795,100+

Approximate earnings for Oct., $931,200, against $815,100 for Oct., 1906.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-7, from July 1, 1907:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	$7,008,274.46	$4,501,421.80	$2,506,852.66	$135,041.58+
Aug. 7	010,177.40	4,439,902.25	2,570,275.15	107,695.95+
Sept. 6	423,452.68	4,272,099.33	2,151,353.35	286,578.28—
	$20,441,904.54	$13,213,423.38	$7,228,481.16	$43,840.75—

Approximate earnings for Oct., $7,036,000, against $6,918,000 for Oct., 1906.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Sept., $309,792.43; net earnings, $92,551.89; against $291,707.73 gross and $108,009.30 net for Sept., 1906. Net earnings for three months ended Sept. 30, $308 837.56, against $349,666.46 for same period 1906. Approximate earnings for Oct. $296,007, against $294,288 for Oct., 1906.

MINERAL RANGE RY.—Gross earnings for Sept., $67,869.95; net earnings, $13,758.68, against $62,217.72 gross and $15,526.90 net for Sept., 1906. Net earnings for three months ended Sept. 30, $50,560.47, against $60,100.00 for same period 1906. Approximate earnings for Oct., $71,910, against $69,340 for Oct., 1906.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Sept., $1,049,133.65; net earnings, $400,643.64; against $1,293,528.63 gross and $742,460.48 net for Sept., 1906. Net earnings for three months ended Sept. 30, $1,175,335.52, against $1,772,083.00 for the same period 1906. Approximate earnings for Oct. $1,346,090 against $1,274,743 for Oct., 1906.

Grand Trunk Ry. Earnings, Expenses, etc.

The following figures give the earnings of the G.T.R., the C. A. R., the G. T. Western Ry., and the D. G. H. & M. Ry., separately, for Aug., as compared with Sept., 1906:

GRAND TRUNK RAILWAY.

	1907	1906
Earnings	$3,091,100	$2,928,000
Expenses	2,231,700	1,998,000
Net earnings	$ 859,400	$ 930,000

CANADA ATLANTIC RAILWAY.

Earnings	$ 207,200	$ 192,800
Expenses	191,200	162,000
Net earnings	$ 16,000	$ 30,800

GRAND TRUNK WESTERN RAILWAY.

Earnings	$ 591,300	$ 539,200
Expenses	478,150	454,800
Net earnings	$ 113,150	$ 84,400

DETROIT, GRAND HAVEN & MILWAUKEE RY.

Earnings	$ 160,300	$ 152,600
Expenses	125,200	109,500
Net earnings	$ 35,100	$ 43,100

Approximate earnings for Oct., $4,168,500, against $3,892,357 for Oct., 1906.

Railway Finance, Meetings, etc.

Algoma Central and Hudson Bay Ry.—There is some discussion at Sault Ste. Marie, Ont., as to the future of this railway, and the suggestion is made that the Ontario Government take over the line and complete it as a Government undertaking as far north as a junction with the G.T. Pacific Ry.

Atlantic and Lake Superior Ry.—A special meeting of the holders of certificates of participation in the A. and L.S. Ry. Trust Fund, was held in Montreal, Nov. 6, for the execution of the agreements prepared by the management for the acquisition of certain claims against the Baie des Chaleurs Ry., and the A. and L.S. Ry., and to issue certificates of participation as may be stipulated in such agreements.

Canada Atlantic Ry.—Following are the officers and directors for the current year: President, C. M. Hays; Vice-President, E. H. Fitzhugh; Secretary and Treasurer, F. Scott; other directors: W. H. Biggar, K.C.; W. Wainwright, J. W. Loud, R. S. Logan. The annual meeting of shareholders was held at Ottawa Oct. 24, and was of a formal character. One of the objects of the meeting according to the notice was to pass a resolution amalgamating the company with the G.T.R.

The action of H. S. Sprague, of New York, against J. R. Booth, to recover $2,250,000 for alleged breach of contract in connection with sale of the Canada Atlantic Ry., was heard at the assize court at Ottawa, Nov. 5, and judgment has been reserved. The amount is made of $250,000 deposit paid on the contract, and $2,000,000 damages for the breach. The plaintiff is the assignee of the original contract, which was made in 1902 with A. Meyer, of New York, who subsequently assigned the contract to Dr. W. Seward Webb, who later assigned it to Sprague. The deposit of $250,000 was paid Mar. 15, as security that the agreement would be carried out, the purchase money $10,000,000 was to be ready June 2, but it was not forthcoming, and the railway was subsequently sold to the G.T.R. for $14,000,000. Mr. Booth in his evidence stated that he told the solicitor for the original holder of the agreement on June 3, 1902, that if he could show evidence of means he would be given time and opportunity to carry out the contract. Mr. Regemsburger, the solicitor referred to, denied this. The contention of the plaintiff is that time was not the essence of the contract.

Crow's Nest Coal Co.—G. G. S. Lindsay, K.C., heretofore General Manager, has been elected President, succeeding Hon. G. A. Cox, and is succeeded as General Manager by J. D. Hurd, Mining Engineer, Duluth, Minn. R. M. Young has been appointed Secretary.

Cumberland Ry. and Coal Co.—It is understood that negotiations are in progress with the Dominion Iron and Steel Co., for the sale by the C.R. and C.C. of its coal areas at Port Morien, N.S. The coal lands cover an area of thirteen square miles, and some amount of development work has been done.

Application will be made next session of the Dominion Parliament for an act increasing the borrowing powers of the company, and its powers of holding real and personal property, and confirming a mortgage in favor of the Royal Trust Co., as trustee for bondholders, and the securities issued or to be issued thereunder.

A meeting of shareholders has been called for Dec. 13, for the purpose of approving of the application to Parliament for power to increase the company's borrowing powers, confirming a mortgage to the Royal Trust Co., and for other purposes.

Esquimalt and Nanaimo Ry.—Action is being taken against three settlers on the E. and

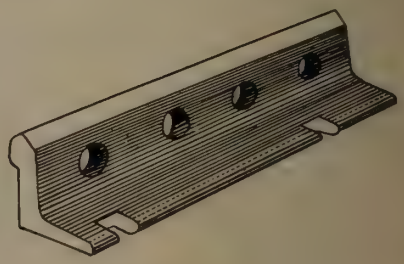
THE HAMILTON STEEL & IRON CO.

LIMITED

HAMILTON, CANADA.

AXLES

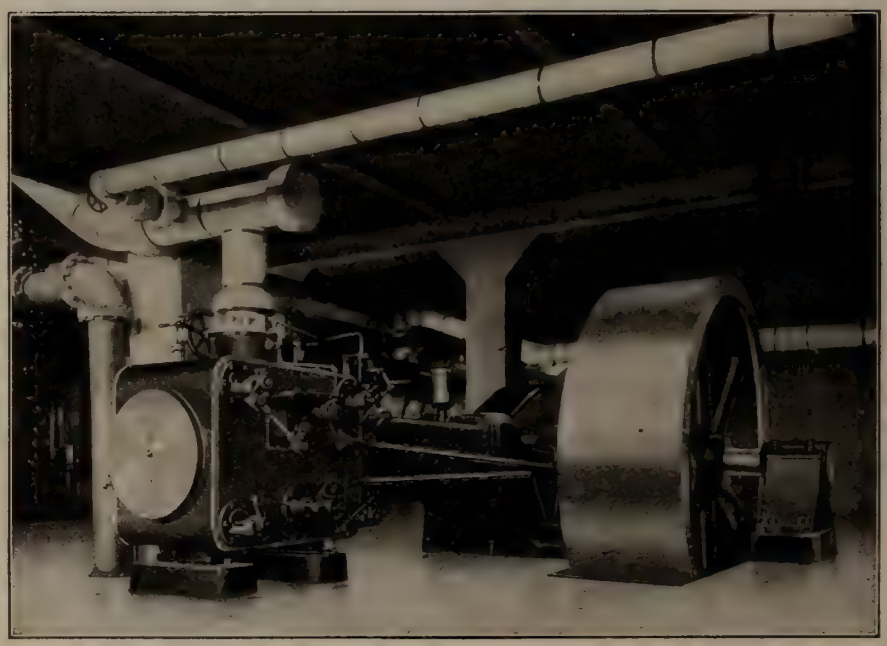
CAR AND LOCOMOTIVE



Railway Angle Bars and Track Spikes

FORGINGS MARINE AND RAILROAD

Pig Iron, Iron and Steel Bars



This cut shows one of the six

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N. Ry. lands to prevent them taking out coal. The question of the right of the settlers on these lands was in the courts for some years, and it was understood that the recent decision of the Imperial Privy Council had effectually settled the matter in favor of the settlers. The Dunsmuir estate, which is part owner with the C.P.R. of a portion of the lands, is raising the point of the right to mine coal. This point appears to arise principally on account of actual settlers transferring their lands to other owners or companies for mining purposes.

Great Northern Ry., U.S.—The St. Paul, Minneapolis and Manitoba Ry., which has been operated by the G.N.R. since 1890, under a lease for 999 years, has been purchased, the consideration being $35,000,000. The properties in Manitoba will be taken over subject to encumbrances. Deeds have also been filed at St. Paul, covering the sale to the G.N. Ry. of the other subsidiary lines of the company in Minnesota.

Guelph Junction Ry.—Total revenue for three months ended Oct. 31, $12,569.28; operating expenses, $7,541.58; net earnings, $5,027.70.

Intercolonial Ry.—The Minister of Railways in a speech at Campbellford, Ont., recently said the Intercolonial Ry. had not been built as a business proposition, but he might say that the present year would show a profit of hundreds of thousands of dollars. If he found upon inquiry that the branch lines in the Maritime Provinces, at present owned by separate companies, would be better run by the Government, he would suggest that they be leased, and although millions of dollars had been expended by the Government upon transportation, it would be necessary to spend millions more in order to afford the transportation facilities demanded by the people.

The report of the Minister of Railways for the nine months ended Mar. 31, contained statistical information as to the operations of the Intercolonial Ry. for that period. The gross earnings amounted to $6,248,311, exclusive of $45,440 received from the Dominion Atlantic Ry. as rental for the Windsor branch. The expenses were $6,030,171 for the Intercolonial Ry., and $15,425 for the Windsor branch. The Intercolonial Ry. produced a profit of $218,139.17 and the Windsor branch a profit of $30,015.20. There was added to the capital account during the nine months $1,506,209.26, making the total expenditure on account of capital $82,744,937.89. The accounts for the line are now kept according to the practice of the C.P.R., the G.T.R., and the principal lines in the U.S., consequently the usual comparisons with the figures of the previous year are not given. The revenue account shows: Passenger earnings, $1,952,438.88; freight earnings, $4,032,745.00; mail and express earnings, $235,039.88; miscellaneous earnings, $28,087.24; total, $6,248,311.00. The expenditure was distributed under the following heads: Maintenance of ways and structures, $1,111,886.68; maintenance of equipment, $1,180,521.16; conducting transportation, $3,485,224.83; general expenses, $147,537.16; rental of leased lines, $105,000; total, $6,030,171.83; leaving net earnings of $218,139.17. Engine mileage, 6,810,418 miles; train mileage, 5,069,575 miles; car mileage, 61,236,603 miles; gross earnings per mile of railway, $4,313.29; per engine mile, $0.91.75; per train mile, $1.23; per car mile, $0.10.20; passengers carried, 2,044,847, of whom 391,721 were through passengers; freight carried, 2,606,073 tons, of which 1,996,869 tons was local and 609,204 tons through freight. Eight locomotives were condemned; 23 locomotives were purchased on capital account, and two on revenue account. Attention is called to the cost of special train service for the European mails which for the nine months under review cost about $50,000. The Deputy Minister expresses an opinion that in the future Post Office Department should defray the cost, as an item which it would certainly have to meet were the Intercolonial a private instead of a national road.

Merchants' Dispatch Transportation Co.—This forwarding company, which was organized in 1856, it was announced at Milwaukee, Wis., Oct. 30, had been acquired by the New York Central and Hudson River Ry. Co. The company's offices were at 350 Broadway, New York City, the officers being: Vice-President and General Manager, W. B. Pollock; Traffic Manager, Carl Howe; Manager Car Shops, R. H. Parks, Despatch, N.Y.; Auditor, R A White; Freight Claim Agent, W. Goepfert; Cashier, T. Keese; Car Accountant, C. O. Munn; General Foreign Agent, H. Gee; General Eastern Agent, R. J. Menzies. The company owns 5,994 box and refrigerator cars. Since the foregoing was written, Mr. Howe has received another appointment. See page 907.

Montreal Warehousing Co.—The entire issue of $1,000,000 first mortgage 4% gold bonds, dated April 1, 1906, and due April 1, 1936, has been listed on the Montreal Stock Exchange. The bonds are in coupon form in denominations of $1,000 or £205, 15s. 3d., and semi-annual interest is payable at the G.T.R. fiscal agency in London, Eng., or at Montreal. This issue forms the only lien upon all the G.T.R. terminal storehouses and elevators, by which company the principal and interest are unconditionally guaranteed.

Ontario and Quebec Ry.—The regular interest for the half-year, due Dec. 1, on the 5% debenture stock, and the half-year's interest on the common stock at the rate of 6% per annum, will be paid by the Bank of Montreal, at the C.P.R. offices, Montreal or London, on and after Dec. 2.

Prince Edward Island Ry.—The report of the operations of this railway for the nine months ended Mar. 31, are given in the report of the Department of Railways just issued: Gross receipts, $215,434.97; working expenses, $283,148.50; loss, $67,713.53. The capital account shows a total expenditure of $7,307,299.21, an increase of $91,710.52, of which $70,316 was for increased accommodation at Charlottetown. Passengers carried, 232,371, producing $97,750.52; freight carried, 67,144 tons, producing $98,657.07; mails and sundries produced $19,027.38. Engine mileage, 344,050 miles; train mileage, 252,292 miles; car mileage 1,463,186 miles. Working expenses, per train mile, $1.12.23, and per mile of railway, $1,060.48. Receipts per mile of railway, $806.87.

Stanstead, Shefford and Chambly Ry.—At the annual meeting of shareholders at Waterloo, Que., Nov. 13, the usual formal business was transacted. The company line is operated by the Central Vermont Ry. under a lease for 99 years and no separate report is issued. Following are the officers and directors for the current year: President, Hon. S. W. Foster; Vice-President, E H. Fitzhugh; other directors: Hon. E. C. Smith; C. M. Hays, G. C. Jones, A. H. Moore, G. E. Robinson, J. P. Noyes, G. Stevens; Secretary-Treasurer, C. H. Parmelee; Assistant Secretary-Treasurer, W. H. Chaffee.

Temiskaming and Northern Ontario Ry.—Judgment has been reserved in the suit brought by Gillies Bros. against the commissioners of the T. and N.O. Ry. to recover $24,000 for damages done to timber limits during 1906, by sparks from the locomotives. Judgment has also been reserved in the action for $91,000 for damages caused to the same limits during 1905.

Gross earnings for July, $80,046; working expenses, $59,075; net earnings, $20,971, against $12,012 for July, 1906.

Receipts for Aug. $82,457, against $77,457 for Aug. 1906. Working expenses, $62,813.

Vancouver, Victoria and Eastern Ry. and Navigation Co.—At a meeting of the shareholders of the Victoria Terminal Ry. and Ferry Co., a resolution was passed transferring to the V.V. and E. Ry. and N. Co. the line on the mainland between Port Guichon and New Westminster. The shareholders of the Vancouver, Westminster and Northern Ry. have authorized a transfer of its line between Westminster and Vancouver to the V.V and E. Ry. and N. Co. These lines have been operated since their construction in connection with the Great Northern Ry., U.S., giving that company an entrance into Vancouver, and a ferry connection with Vancouver Island.

Vancouver, Westminster and Yukon Ry.—The transfer of the Westminster-Vancouver line to the Vancouver, Victoria and Eastern Ry. and Navigation Co. does not affect the other charter powers of the company, viz., the construction of a line from Vancouver to Dawson City

Victoria Terminal Ry. and Ferry Co.—See Vancouver, Victoria and Eastern Ry. and Ferry Co

Development of the Locomotive Engine.

This is the title of a well-illustrated volume of 668 pages, by Angus Sinclair, originally a Scottish locomotive engineer, for many years resident in the U.S., and publisher of Railway and Locomotive Engineering. It is issued at $5 by the Angus Sinclair Publishing Co., New York. The volume gives a history of the growth of the locomotive from its most elementary form, showing the gradual steps made toward the developed engine, with biographical sketches of the eminent engineers and inventors who nursed it on its way to the perfected form of to-day. The volume is divided into 33 chapters, and the author states that he has been 30 years collecting material for the work. He has succeeded in getting together from Europe and America a great deal of valuable and curious information respecting the railway locomotive and its development. It is written in a popular style, and is a book which can be read with interest and profit by every person, whether a mechanical expert or an outsider. A special chapter is devoted to railway development in Canada, and the power used thereon from the old St. John's-Laprairie Ry. in Quebec, to the present line. This chapter is written by G. S. Hodgins, son of J. G. Hodgins, of the Ontario Education Department, Toronto, and at one time connected with the C.P.R. Mechanical Department.

The Railway Y.M.C.A. is considering proposals for the establishment of branch associations at Moncton, N.B., and Hamilton, Ont.

The C.P.R. put on a new train to run between Toronto and Ottawa Nov. 25. There will be one train a day each way, leaving each city at 10.45 p.m., and reaching its destination at 7 a.m.

The Algoma Central and Hudson Bay Ry. Co.'s steamboat Paliki loaded a cargo of 2,000 tons of pig iron from the Atikokan blast furnace, Port Arthur, Ont., Nov. 5, for the steel rail mills at Sault Ste. Marie, Ont.

It is proposed on behalf of railway employes to ask the Dominion Parliament next session to amend the act passed last session dealing with labor disputes, commonly referred to as the Lemieux Act, by exempting them from the clause prohibiting strikes during investigations under the act.

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N. A. RHODES, Vice-President

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J. M. CURRY, Sec.-Treas.

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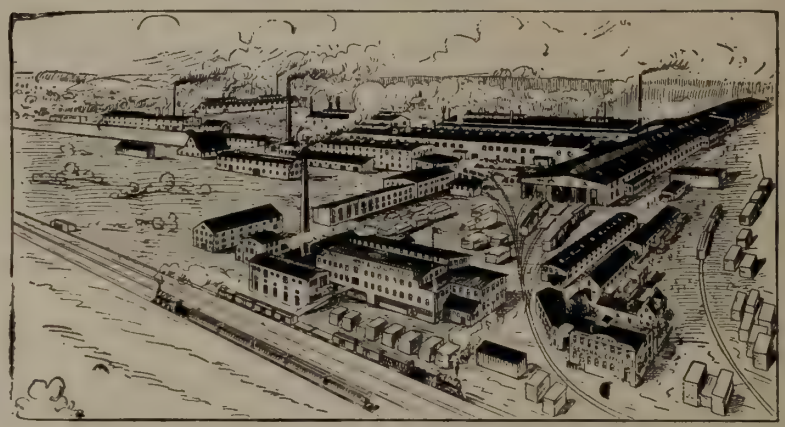

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BOSTON PHILADELPHIA CHICAGO PITTSBURG

Canadian Northern Ry. Construction, Etc.

Canadian Northern System Terminals, Ltd.—A company with this title has been incorporated under the Dominion Companies Act, with a capital of $2,000,000 and offices at Montreal, for the purpose of constructing railway terminals and everything connected therewith; hotels, parks, elevators, flour mills, smelters, power houses, etc., and to engage in mining, lumbering, the development of electric energy, shippers and forwarders and a variety of other businesses. The provisional directors are all connected with Mackenzie, Mann & Co.'s offices, or with the C.N.R.

Canadian Northern Quebec Ry.—The grading on the cut-off from near Garneau Junction to Quebec city is reported to be completed to within a few miles of the latter point. The substructures of the smaller bridges and most of those for the larger bridges have been completed. The steel for the superstructures is being delivered, and as soon as the bridge work has sufficiently progressed tracklaying will be gone on with. The contractors are O'Brien and Mullarkey.

Canadian Northern Ontario Ry.—The route for the company's projected line from Ottawa to Toronto has been approved by the Minister of Railways, for the portion between Toronto and Verona. With Toronto as a starting point the line runs up the Don Valley to East Don, and under the G.T.R. to the end of the York yards, passing in front of Scarboro cliffs. From there it goes north of Oshawa and Bowmanville along the height of land to Orono, 45 miles from Toronto. It skirts Port Hope and runs into Cobourg. Crossing the G.T.R. near Brighton it takes in Trenton and Belleville, and goes up the Salmon River to Verona. The route which the company desires to follow from this point goes on to Portland, runs south of Rideau Lake and Smith's Falls. The company has served notices of expropriation on property owners affected, for a new highway running from Rosedale Ravine Drive to Bay View Ave., which it is to construct under agreement with the city in return for rights over Bay View Ave. Several of the property owners have taken steps to fight the expropriation proceedings.

The Canadian Northern Ry. is erecting large freight sheds at Humboldt, Sask.

Grading on the new line into Regina, Sask., was expected to be completed by the end of Nov., and the tracklaying gang was following up closely. The track is expected to be laid into Regina early in Dec. The empty construction trains are being utilized to carry wheat out. The new line extends from Brandon, Man., crossing the Hartney-Virden branch at Scarth, and runs directly to Regina, where it effects a junction with the Qu'Appelle, Long Lake and Saskatchewan Ry., acquired by the company in 1906.

Construction on the line from Saskatoon to Goose Lake, Sask., is being proceeded with, and recent reports state that nearly 20 miles of grading has been completed from about 10 miles out of Saskatoon. The question of the entrance into Saskatoon was decided Nov. 11, and work was immediately started on the right-of-way in the city as well as at various points on the 10 mile gap. The route of the line from Dalmeny to Saskatoon, 15 miles, and from mileage 17 south of Saskatoon to the south-west of Goose Lake, mileage 73, has been approved by the Minister of Railways. Local reports state that the company's intention is to extend this line to Calgary. (Nov., pg. 825).

The Northern Navigation Co. of Ontario has decided, for the present, not to order a new vessel to replace the wrecked Monarch.

TRADE AND SUPPLY NOTES.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Toronto Bolt and Forging Co., Ltd., has issued a comprehensive catalogue consisting of 168 pages, illustrated with cuts of the various articles manufactured at its works.

The Hamilton Steel and Iron Co. has completed the installation of an additional blast furnace of modern construction and equipment, with an output capacity of 300 tons a day.

The name of the Dominion Dump Car Co., Ltd., Montreal, has been changed to that of the Hart-Otis Car Co., Ltd., by supplementary letters patent issued by the Dominion Government.

The Rail Joint Company of New York, exclusive makers of base supporting rail joints, announce that their rail joints are now in use from ocean to ocean, the Panama Rd. being their latest equipment.

A H. Wheatley has been appointed Manager of the Locomotive and Machine Co. of Montreal, succeeding H. B. Ayres, resigned to become General Manager of H. K. Porter Co., Pittsburg, Pa.

The O. M. Edwards Co., manufacturers of window fixtures, shade rollers, sash balances, extension platform, trap doors, etc., of Syracuse, N.Y., will remove their Canadian factory from St. Catharines, Ont., to Montreal, in Jan., 1908.

The Canadian Westinghouse Co. has issued the following illustrated circulars: 1139, describing starting and field rheostats; 1089, describing Westinghouse No. 101-B2 railway motor; 1122, describing Standard three-point railway diverter.

H. B. Ayers, who recently resigned the managership of the Locomotive and Machine Co. of Montreal, has been appointed General Manager of H. K. Porter Co., locomotive manufacturers, Pittsburg, Pa. He was formerly General Manager of the Pittsburg Locomotive Works.

G.T.R. Betterments, Construction, Etc.

Tracklaying.—The work of replacing the present 85-lb. steel with 100-lb. rails is being proceeded with on different sections of the line. The section where the work is being gone on with at present is between Montreal and St. Anne's, and this mileage it is expected to complete this year. This 100-lb. steel has already been laid on some sections between Toronto and Hamilton, Ont., and on some sections between Port Huron, Mich., and Chicago. The 85-lb. steel released is being laid on other sections to replace lighter rails.

Montreal Track Elevation.—The Montreal City Council passed a resolution Nov. 13, instructing the committee on level crossings to report by Dec. 1 as to the position of the negotiations respecting the proposed abolition of level crossings on the G.T.R., by means of the elevation of the tracks. The Assistant City Clerk, in an interview, said the situation is that the city is willing to vote generously to raise the tracks if an agreement can be made with the company, but so far there has been a feeling on the part of the Council that the company wants to bear a smaller portion of the expense than is fair. The question of raising the tracks has been before the Council in one form or another for over 20 years. The position now is, however, that the City Council has authority to borrow money to the extent of $2,000,000 to raise the tracks.

St. Henri Yards.—The Montreal City Council has agreed to sell the company about 20,000 sq. ft. of land in Cote St. Paul at 12c. a foot, for the purpose of enlarging its trackage accommodation along the Boulevard St. Paul.

A Toronto-Ottawa Line.—Press correspondence suggests a short route from Toronto to Ottawa of 196 miles, by the construction of two stretches of line, and the utilization of two sections of existing lines as follows: The existing line between Toronto and Oshawa, 34 miles; a new section from Oshawa to Millbrook, 20 miles; the existing line from Millbrook to Lakefield, 22 miles; and a new line from Lakefield to Ottawa, 120 miles. This would mean 140 miles of new construction.

London Track Elevation.—Instructions have been received in London, Ont., that all properties recently purchased in connection with the track elevation and other improvements in the city, are to be kept in repair and rented. This is taken to indicate that nothing will be done for some considerable time in the way of track improvement.

Sarnia Tunnel.—Owing to some delays in obtaining material it is not expected that it will be possible to operate trains regularly through the Sarnia tunnel by electricity until early in the new year. It was intended that the work would have been completed by Aug. (Nov., pg. 831.)

Toronto Union Station Lands Purchase.—In the Supreme Court at Ottawa, Oct. 30, judgment was rendered on the motion made in the case of the G.T.R. against the C.P.R., the latter asking to have the minutes of judgment as settled varied as to the payment of interest by the C.P.R. only for the period between May 6, 1903, the date on which the G.T.R. paid the purchase money to the Crown for the Toronto station lands, and June 3, 1903, when the C.P.R. tendered half of such purchase money to the G.T.R., which was refused by the latter. The motion was granted with costs, and it was ordered that the minutes should be amended in the terms of the application as above stated, providing for payment of interest up to the date of the tender only

Hon. G. P. Graham, Minister of Railways, returned to Ottawa, Nov. 14, after having made his first official trip of inspection over the Intercolonial Ry.

The Board of Railway Commissioners' inspectors McCaul and Black have made an investigation of the circumstances attending the Moor Lake accident on the C.P.R., Nov. 15, and will report in due course.

We are advised that nothing has been definitely decided with reference to the inauguration of a motor car service on the C.P.R. Gibson branch, which press reports stated was to be put on in the spring.

At a special meeting of shareholders of the Lake St. Joseph Hotel Co., in which officials of the Quebec and Lake St. John Ry. are largely interested, held Nov. 5, it was decided to apply for the appointment of a liquidator, pending the issue of negotiations in progress for an adjustment of the company's affairs. J. G. Scott, General Manager Q. and L. St. J. Ry., said it was expected that the company's affairs would be adjusted during the winter, and that the hotel would be reopened in May, 1908. An order for the winding up of the company was made Nov. 13, and E. F. Wurtele was named provisional guardian of the company's property and assets, pending the appointment of an official liquidator. A meeting of creditors was held Nov. 25.

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HEAD OFFICE:

IMPERIAL BANK CHAMBERS,——MONTREAL

MAINLY ABOUT PEOPLE.

Lady Shaughnessy returned to Montreal from Great Britain Nov. 8.

E. Cotter, one of the oldest employes of the C.P.R. at Winnipeg, died there Nov. 6.

J. K. L. Ross has been appointed commercial manager of the Dominion Coal Co.

L. W. Gillen, infant son of U. E. Gillen, Superintendent G.T.R., Toronto, died there Nov. 2.

W. Whyte, Second Vice-President C.P.R., has been elected President of the Winnipeg Canadian Club.

C. Fitch-Kemp, President of the Dominion Atlantic Ry., died in London, Eng., Nov. 6, aged 68.

Miss Seath, who died in Montreal Oct. 26, was a sister of D. Seath, Secretary Montreal Harbor Commission.

Sir Wm. C. Van Horne, Chairman of the Board, C.P.R., spent some days in Winnipeg and Selkirk recently.

F. Markey, who died at St. Mary's, Ont., Ont., Oct. 18, was father of J. Markey, Master Mechanic, G.T.R., Toronto.

Hon. L. P. Brodeur, Minister of Marine, was the principal guest of the Empire Club, Toronto, at luncheon on Nov. 14.

W. R. Baker, Assistant to the President, C.P.R., Montreal, was married to Mrs. Drysdale, at Sherbrooke, Que., Oct. 30.

A bust of Sir Sandford Fleming, chancellor of Queen's University, Kingston, Ont., presented by the graduates, was unveiled Oct. 16.

A. Murray, heretofore with the Shedden Co., Montreal, has been appointed cashier of the Canadian Northern Transfer Co., Montreal.

R. Bickerdike, M.P., was struck by an electric car at the corner of Victoria Ave., Westmount, Que., recently, and had his left shoulder broken.

E. A. Evans, General Manager Quebec Ry., Light and Power Co., is Hon. Vice-President of the Quebec Hockey Club for the current year.

Hon. W. Pugsley, Minister of Public Works, is acting as Minister of Justice during the absence through ill-health of Hon. A. B. Aylesworth.

E. Walton, chief clerk in the office of the Third Vice-President G.T.R., Montreal, was married to Miss A. L. Bingham, at St. Albans, Vt., Oct. 30.

R. Seddon, chief clerk in the Divisional Accountant's office, Winnipeg, was presented with a suit case by the staff on the occasion of his marriage, Oct. 30.

H. C. Hammond, President of the Northern Navigation Co., Mrs. Hammond and their son, sailed recently for a three months' trip to the south of France.

Harvey Graham, a director and Assistant General Manager of the Nova Scotia Steel and Coal Co., died at New Glasgow, N.S., Oct. 31, after a lengthened illness.

Miss C. E. Nicholls, daughter of F. Nicholls, President Niagara, St. Catharines and Toronto Ry., was married at St. Paul's Church, Toronto, to J. E. Proctor, recently.

C. Shane has retired from the firm of Kelly Bros. & Co., contractors, Winnipeg, Man., and Kenora, Ont., the firm now consisting of Jas. Kelly, Geo. Kelly and Jas. McDole.

At Oil City, Pa., Nov. 22, the wife of E. D. MacKenzie, proprietor of the Arlington Hotel, and formerly Canadian Freight Agent, Pennsylvania Rd., at Toronto, of a daughter.

J. H. Walsh, General Manager Quebec Central Ry., returned to Sherbrooke, Oct. 28, from London, Eng., where he attended the directors' annual consultation.

A portrait of W. Kennedy, who has been appointed Superintendent of Motive Power, Central Vermont Ry., was given on pg. 713, and some biographical details on pg. 747 of our Oct. issue.

Mrs. Bickerdike, wife of R. Bickerdike, M.P., died at the residence of her son-in-law, D. W. Campbell, Manager in Canada of the Elder-Dempster Line of steamers, Montreal, Oct. 27.

L. B. Archibald, Superintendent Dining and Sleeping Cars, Intercolonial Ry., has recovered from his recent illness, and was able to be in Montreal recently in connection with his official duties.

P. Blais, Intercolonial Ry. section foreman at Levis, Que., was presented with the Imperial Service Medal, Nov. 6, by the Minister of Railways, on completing 25 years' service on the line.

A. Rawland, of the C.P.R. Atlantic Steamships office, Quebec, was presented with a cabinet of silverware by C.P.R. officials in that city, recently, upon the occasion of his marriage to Miss M. Jones.

Jas. Wattie, who died at Valleyfield, Que., Oct. 30, was for many years President of the Lake St. Francis Navigation Co., and was also actively engaged in the promotion of the St. Lawrence and Adirondack Ry.

H. E. Beasley, formerly Superintendent C.P.R. at Vancouver, B.C., who is now on leave of absence, is engaged in securing the right-of-way for the extension of the Esquimalt and Nanaimo Ry. to Alberni, B.C.

Miss M. C. Gibbons, daughter of G. C. Gibbons, K.C., chairman of the Canadian section of the International Waterways Commission, was married at London, Ont., Nov. 10, to J. L. Counsell, of Hamilton, Ont.

G. Hodge, engineer, and M. Grimes, conductor, of the excursion train which was wrecked at the Caledon horseshoe curve, Sept. 3, were acquitted of criminal negligence at the Brampton, Ont., assizes, Nov. 16.

M. D. Woodford, formerly President Cincinnati, Hamilton and Dayton Rd., died at Kalamazoo, Mich., recently. From 1872 to 1875 he was Assistant General Superintendent of the old Great Western Ry. of Canada.

J. Davis, postmaster of Alton, Ont., who was injured at a railway crossing Oct. 28, died at his home Nov. 8. He was chief engineer of the Guelph Junction Ry., and was engaged on the surveys for the Guelph and Goderich Ry.

E. Jordan, Jordan, Ont.; R. MacDonald, Goderich, Ont.; — Burnside, Toronto, and — Baby, Hamilton, Ont., sailed from Vancouver, B.C., Nov. 25, to take positions on the Canton-Hankow Ry.'s engineering staff in Northern China.

H. A. Norton, son of A. O. Norton, of Coaticook, Que., and Boston, Mass., manufacturer of Norton jacks, was married at Holy Trinity Church, Montreal, Nov. 9, to Miss Sidney Elizabeth, daughter of Benj. Austin, of Montreal.

D. Robertson, Trainmaster C.P.R., Ottawa, has been on sick leave for some time past, but expects to resume work at an early date. The position of Trainmaster at Ottawa having been abolished he will be given another appointment.

H. S. Head, who has been appointed District Passenger Agent, Wisconsin Central Rd., New York, is a native of Montreal, and started his railway service with the G.T.R. in that city, subsequently going to the company's New York office.

Mrs. Kennedy, wife of W. Kennedy, Superintendent of Motive Power, Central Vermont Ry., died at her parents' home, Cobourg, Ont., Nov. 20, aged 35, and was buried at Belleville, Ont., a large number of G.T.R. motive power department officials attending.

E. Ware, C.E., who died in London, Eng., recently, was a native of Quebec, and was engaged for many years in railway construction in South America. He was a son of W. Ware, C.E., the first white man to cross the divide between Quebec and Lake St. John.

A. E. Killam, Bridge Inspector of the Intercolonial Ry., returned to Moncton, N.B., Oct. 24, from Chicago, Ill., where he had been in attendance at the annual convention of the Association of Bridge Builders and Inspectors. He was accompanied by Mrs. Killam.

J. R. Donnelly was presented with a diamond pin and a ring by the employes of the mechanical department of the G.T.R. Ottawa Division, on his transfer to the position of Master Mechanic of the Northern Division, Allandale, Ont. A diamond pendant was presented to Mrs. Donnelly.

E. H. Williams, locomotive foreman, Canadian Northern Ry., Humboldt, Sask., was on the recent occasion of his transfer from that point, given a gold chain and engraved locket by the enginemen and trainmen, and a gold chain and fob by the shop employes. He was also given an address.

R. Meighan, who has been elected a director of the Montreal Street Ry., is also President of the New Brunswick Ry., and of the Lake of the Woods Milling Co., and a director of the St. John Bridge and Ry. Co., the Dominion Transport Co., Canada North-West Land Co., and the Bank of Toronto.

Sir Jas. Hector, Chancellor of the University of New Zealand, died at Wellington, N.Z., Nov. 6, aged 73. He was geologist to the Palliser expedition which marked the boundary between Canada and the U.S. in 1857, and was the discoverer of the Kicking Horse or Hector pass through the Rocky Mountains.

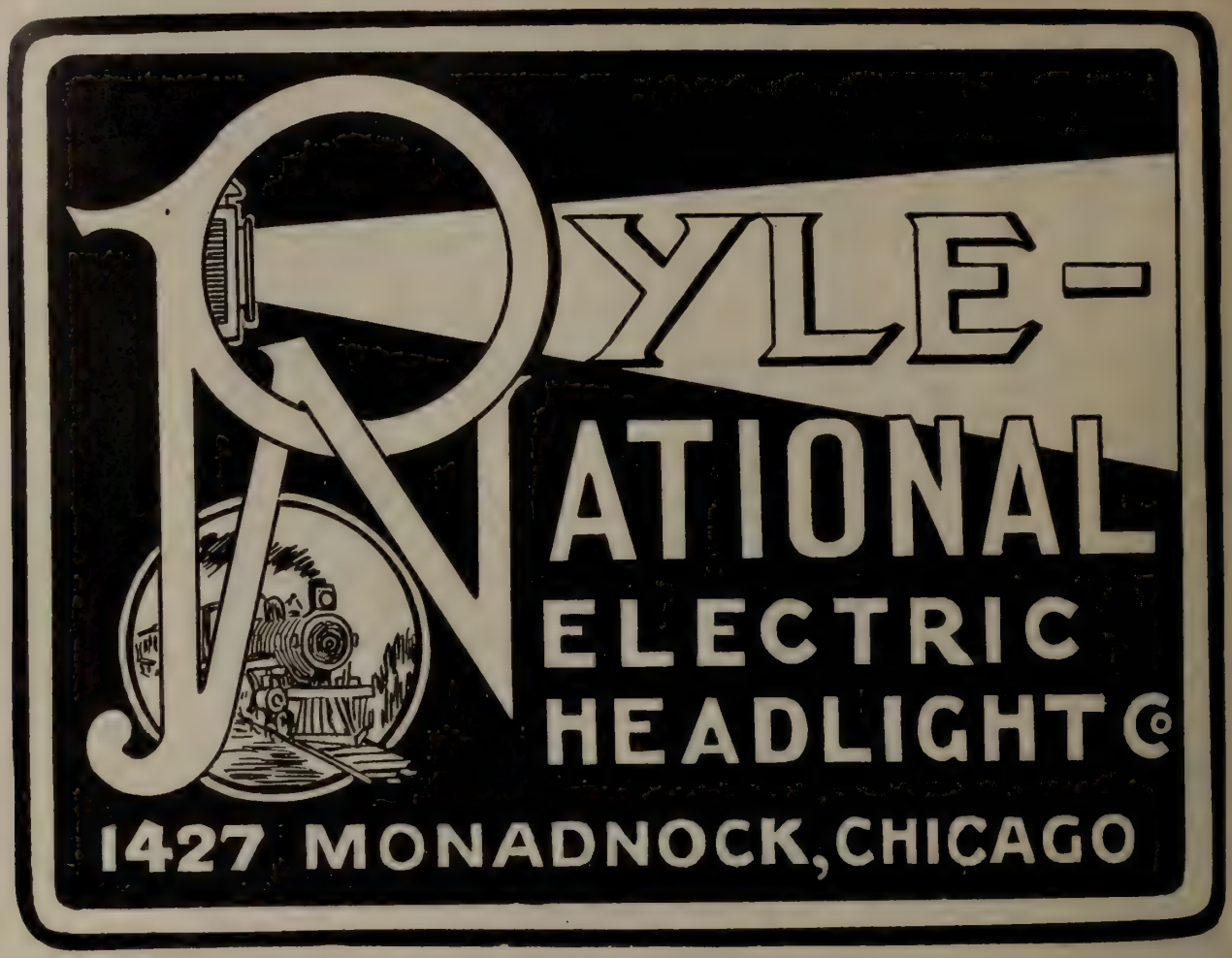
H. G. McMicken, General European Agent, Great Northern Ry., U.S., has returned to London, Eng., after a short visit to the company's offices at St. Paul, Minn., and to relatives at Winnipeg, Man. We are advised, with respect to press reports, that the company has not decided to close its London office.

G. H. Smith, who has been appointed Assistant General Freight Agent, C.P.R., Vancouver, was entertained to a farewell dinner by a number of friends, at the Mariaggi Grotto, prior to his departure from Winnipeg, Nov. 6. He was presented with a travelling bag, and Mrs. Smith with a cut glass fruit stand.

Sir R. G. Reid, of the Reid Newfoundland Co., has instituted proceedings against the estate of the proprietor of the Newfoundland Herald, and the editor, for libel, claiming $50,000 damages. The paper in a recent issue charged Sir Robert with bribery in connection with the company's contracts with the Government.

A. W. Smithers, Vice-President G.T.R., London, Eng., was the principal guest at a dinner given on board the steamboat Lady Grey, recently, by G. W. Stephens, President of the Montreal Harbor Commission. After the dinner a trip was made round the harbor for the purpose of inspecting the improvement works in progress. Mr. Smithers sailed from New York for Liverpool, subsequently, on the S.S. Lusitania

G. A. Walton, who has been appointed District Passenger Agent, C.P.R., at Brandon, Man., was born at Montreal, July 17, 1881, and entered railway service 1897, his record being: June, 1897, to Aug., 1901, clerk in G.T.R. Passenger Department, Montreal; Aug., 1901, to Feb., 1903, rate clerk, C.P.R. Passenger Department, Winnipeg; Feb., 1903, to Feb., 1906, chief clerk, same office; Feb., 1906, to Oct., 1907, station ticket agent C.P.R., Winnipeg



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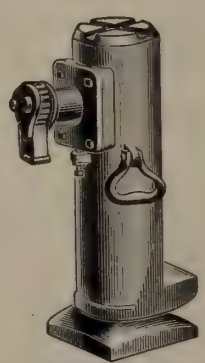
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M. S. Blaiklock, who has been appointed Engineer of Maintenance of Way G.T.R., was born in 1859, and entered railway service in 1880, since which his record has been: 1880 to 1889, assistant engineer G.T.R.; 1889 to 1891, assistant engineer St. Clair Tunnel; 1892 to 1896, inspector; 1896 to April, 1902, resident engineer, Eastern Division G.T.R., Montreal; April, 1902, to Oct., 1907, Superintendent Eastern Division, G.T.R., Montreal.

Lieut.-Col. H. H. McLean, St. John, N.B., who has been selected as the Liberal candidate for Queens-Sunbury, N.B., is intimately connected with transportation interests in the province. He is Vice-President and Managing Director St. John Ry., President New Brunswick Southern Ry., President Fredericton Ry., director and treasurer St. John Bridge Extension Ry., director Imperial Dry Dock Co., in addition to being counsel in N.B. for the C.P.R., the Cumberland Ry. and Coal Co., and the Western Union Telegraph Co.

R. Main, who has been appointed Commercial Agent Canadian Pacific, Minneapolis, St. Paul and Sault Ste. Marie, and Duluth and South Shore railways, at Pittsburg, Pa., was born at Bellevue, Pa., Aug. 3, 1873, and entered railway service in 1888, his record being: 1888 to 1894, successively messenger and assistant westbound rate clerk Division Freight Agent's office, Pennsylvania Rd., Pittsburg; 1894 to 1895, chief clerk, C.P.R. offices, Pittsburg; 1895 to 1896, contracting Freight Agent C.P.R., Pittsburg; 1896 to Oct., 1907, Travelling Freight Agent C.P.R., Pittsburg, Pa.

R. W. McCormick, who has been appointed Assistant Superintendent C.P.R., Ottawa, was born at Liverpool, Eng., Jan. 8, 1867, and entered transportation service in 1879 as operator with the old Canada Central Ry. at Sand Point, Ont., and acted as operator and agent successively at Renfrew, Smith's Falls and Carleton Junction. He was subsequently: Oct., 1896, to Feb., 1897, relieving train dispatcher, Ottawa; Feb., 1897, to Oct., 1901, train dispatcher, Ottawa; Dec., 1901, to Oct., 1903, Chief Train Dispatcher, Ottawa; Oct, 1903, to Aug., 1906, Trainmaster, Ottawa; Aug., 1906, to Nov., 1907, Assistant Superintendent successively at Smith's Falls and Montreal.

A. T. Weldon, who has been appointed Division Freight Agent, Intercolonial Ry. at Halifax, N.S., was born at Dorchester, N.B., Mar. 6, 1876. Entered railway service 1890 as clerk in I.C.R. local freight office, Moncton, N.B., since which he has been consecutively to April, 1900, in different capacities in I.C.R. freight service; Dec., 1901, to Aug., 1904, in I.C.R. Division Freight Agent's office, Halifax, N.S.; Aug., 1904, to May 1, 1907, Secretary Halifax Board of Trade; May 1, 1907, to Nov. 18, 1907, General Sales Agent, Port Hood, Richmond Ry. Coal, Ltd., at Halifax, N.S.; from Nov. 18, 1907, Division Freight Agent I.C.R. at Halifax.

J. W. Hanley, who has been appointed General Passenger Agent Central Vermont Ry., St. Albans, Vt., was born at Malone, Franklin County, N.Y., Mar. 20, 1863, and entered railway service May, 1882, his record being: May to June, 1882, auditing department, Central Vermont Ry., St. Albans; June to Oct., 1882, billing and receiving clerk local freight station Rutland Rd., St. Albans; Oct., 1882, to June, 1884, ticket stock clerk, Passenger Department, Central Vermont Ry., St. Albans; June, 1884, to Mar., 1888, rate clerk Passenger Department, and assistant ticket agent same road; Mar. to Aug., 1888, ticket agent union station, Rutland, Vt.; Aug., 1888, to Nov., 1907, chief clerk Passenger Department Central Vermont Ry., and compiler of the New England Joint Western Tariff "J."

M. H. Brown, who has been appointed General Freight Agent in charge of local traffic of the Ontario Division of the C.P.R. at Toronto, was born at Richmond Hill, Ont., Sept. 2, 1866, and entered railway service as a junior clerk in the general freight office at Toronto, Oct. 1, 1887, remaining there until April, 1890. Since then his service has been: April, 1890, to Aug., 1893, chief clerk to District Freight Agent at Detroit; Aug., 1893, to Mar., 1896, chief clerk to the Freight Traffic Manager, Toronto; Mar., 1896, to July, 1899, chief clerk to the Freight Traffic Manager, Montreal; July, 1899, to June, 1901, District Freight Agent, Detroit; June, 1901, to Oct., 1902, Assistant General Freight Agent, Ontario Division, at Toronto; Oct., 1902, to Nov., 1907, General Freight Agent, Ontario Division, Toronto. Entire service with the C.P.R.

A. A. Tisdale, who has been appointed assistant to the Vice-President and General Manager G.T. Pacific Ry., Montreal, was born at Mount Vernon, Ont., Mar. 8, 1874, and entered railway service in Sept., 1889, serving until July, 1892, in various capacities in the G.T.R. local freight office at Hamilton, Ont. In July, 1892, he was transferred to the Chief Engineer's office as secretary, and remained in the same capacity when the engineering offices were moved to Montreal, Feb., 1896. Appointed secretary to F. H. McGuigan, then General Superintendent, G.T.R., Montreal, May, 1899. Mr. Tisdale remained with him in his successive positions as manager and Fourth Vice-President, as secretary, chief clerk and assistant, and after Mr. McGuigan's resignation he was appointed assistant to the General Transportation Manager.

W. M. Kirkpatrick, who has been appointed General Freight Agent C.P.R., Ontario Division, Toronto, for through traffic, is a son of the late Sir Geo. A. Kirkpatrick, formerly one of the C.P.R. directors. He was born at Kingston, Ont., Oct. 8, 1874, and entered railway service Mar. 7, 1892, in the office of the Vice-President, C.P.R., since which he has filled various positions in the Chief Engineer's office, foreign freight office, Montreal; General Freight Agent's office, Toronto; from July, 1899, to Dec., 1902, he was clerk in the office of the Fourth Vice-President; from Dec., 1902, to April, 1905, he was Assistant General Freight Agent Pacific Division, Vancouver; from April, 1905, to Feb., 1907, Export Freight Agent at Montreal; Feb., 1907, to date of his present appointment, General Freight Agent, Atlantic Division, St. John, N.B.

A. W. Wheatley, who has been appointed Manager of the Locomotive and Machine Co. of Montreal, Ltd., was born in Ashford, Kent, Eng., and served an apprenticeship as machinist in the South-Eastern Ry. shops there. In 1892 he went to the United States, since which his record has been: 1892 to 1894, in Northern Pacific Ry. employ at St. Paul, Minn.; 1894, transferred to Staples, Minn.; 1895 to 1900, roundhouse foreman there; 1900 to 1902, general foreman at Livingstone, Montana; Dec., 1902, to June, 1903, Master Mechanic, Yellowstone Division, at Glendive, Montana; June, 1903, to March, 1904, General Master Mechanic at St. Paul, Minn.; Feb., 1905, to Mar., 1906, Shop Superintendent, Rock Island Rd., at Moline, Ill.; Mar., 1906, to June 1, 1907, Assistant Superintendent Motive Power, Union Pacific Rd., at Omaha, Neb.; June 1, 1907, to Oct., 1907, General Inspector, American Locomotive Co., Schenectady, N.Y.

J. K. McNeillie, who has been appointed Assistant Superintendent C.P.R., Toronto, was born there Feb. 23, 1874, and entered railway service in 1890, his record being: May to July 1890, call boy and clerk in stores department, G.T.R., Lindsay, Ont.; July, 1890, to Nov., 1891, apprentice G.T.R. roundhouse, Lindsay; Nov., 1891, to Sept., 1896, apprentice, locomotive fitter and machinist, G.T.R. shops, Point St. Charles, Montreal; Sept., 1896, to Nov., 1897, clerk in Superintendent and Trainmaster's office, C.P.R., Farnham, Que.; Nov., 1897, to Nov., 1899, chief clerk in Superintendent's office, C.P.R., Farnham, Que.; Nov., 1899, to May, 1900, clerk in General Superintendent's office, C.P.R., Winnipeg; May, 1900, to July, 1902, chief clerk in same office; July, 1902, to Mar., 1903, Car Service Agent, C.P.R., Winnipeg; Mar., 1903, to Oct., 1907, in Car Service Department, C.P.R., Montreal, in charge of the distribution of passenger equipment.

T. J. Kennedy, General Superintendent Algoma Central and Hudson Bay Ry., whose portrait appears on the first page of this issue, entered railway service as chainman on the first survey for the C.P.R. east of Winnipeg in 1874, since which he has been consecutively: June, 1877, assistant engineer contract 15, C.P.R.; May, 1880, engineer for Manning, Macdonald & Co., contractors section B, C.P.R., at Rat Portage; Oct, 1882, to spring of 1885, superintendent of construction for Manning, Macdonald & Co. on section B.; June, 1885, roadmaster C.P.R. White River section; Aug., 1892, Superintendent Chapleau district C.P.R.; Sept., 1899, Superintendent North Bay district C.P.R.; June, 1900, to date, General Superintendent Algoma Central and Hudson Bay Ry., and Manitoulin and North Shore Ry. In 1904 he was also appointed manager of the International Transit Co., the Trans-St. Mary's Traction Co., and the Ferry Line at Sault Ste. Marie, Ont. and Mich.

Carl Howe, who has been appointed Manager of the Merchants Despatch and other fast freight lines at Buffalo, N.Y., was born at Berrien Springs, Mich., June 11, 1870, and entered railway service in the summer of 1889 with the Michigan Central Rd., at Niles, Mich., remaining with that company until the date of his present appointment. His record is: Oct., 1889, to Oct., 1890, clerk in local freight office, Michigan City, Ind.; Oct., 1890, to April, 1893, chief clerk and cashier, same office; April, 1893, to Sept., 1894, local agent, Chicago Heights, Ill.; Sept., 1894, to May, 1898, Travelling Freight Agent, Chicago, Ill.; May, 1898, to Oct., 1899, assistant chief clerk, Freight Traffic Manager's Office, Detroit, Mich.; Oct., 1899, to July, 1900, chief clerk, same office; July, 1900, to Jan., 1907, Assistant General Freight Agent, Buffalo, N.Y.; Jan. to Oct., 1907, manager Merchants Despatch Transportation Co., New York. He was President Canadian Freight Association, 1905-06.

H. C. Philpott, General Sales Agent, Dominion Car and Foundry Co., Ltd., Montreal, died suddenly near Galt, Ont., Nov. 21. He arrived at Galt in the morning, and in company with M. N. Todd, President of the Galt, Preston and Hespeler Electric Ry., drove a short distance into the country to look at some horses. While in the stable he complained of the atmosphere being stuffy, and went outside. A moment or two after another member of the party followed him and found he had collapsed. His body was taken to his residence in Toronto, and he was buried in Mount Pleasant cemetery there. Mr. Philpott, who was widely known and very popular in railway circles throughout Canada, was born at Belleville, Ont., Aug. 28, 1871. He was in the Illinois Malleable Iron Co.'s service at Chicago, and then with the Gould Manufacturing Co., Seneca Falls, N.Y. In 1903 he was appointed sales agent for the Canadian General Electric Co., and in Aug. 1906, entered the Dominion Car and Foundry Co.'s service. He leaves a wife and two children.

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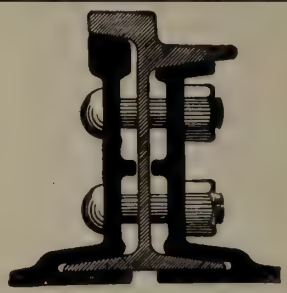
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CORISTINE BUILDING, - - - MONTREAL.

J. W. Loud, Freight Traffic Manager, G.T.R. and Central Vermont Ry., who was recently also appointed to a similar position on the G.T. Pacific Ry., was born in Warwickshire, Eng., and was in the employ of the Midland Ry. from Aug., 1861, to 1872, when he came to Canada, his subsequent record being: Sept., 1872, to Jan., 1875, clerk in General Eastern Freight Agent's office, G.T.R.; Jan, to April, 1875, G.T.R. Agent at Hamilton, Ont.; April, 1875, to Sept., 1877, chief clerk, Assistant General Freight Agent's office, G.T.R., Toronto; Sept., 1877, to Nov., 1881, chief clerk General Freight Agent's office, G.T.R., Montreal; Nov., 1881, to Dec., 1886, G.T.R. freight agent, Toronto; Jan., 1887, to Aug., 1889, General Freight Agent, through traffic, G.T.R., Montreal; Sept., 1889, to Feb., 1896, Traffic Manager, Detroit, Grand Haven and Milwaukee Ry., Detroit, Mich.; Feb., 1896, to April, 1900, General Freight Agent, G.T.R., Montreal; May, 1900, to date, Freight Traffic Manager, G.T.R. He was subsequently appointed Freight Traffic Manager Central Vermont Ry., and recently to a similar position on the G.T. Pacific Ry., and represents the G.T.R. company's interests on a number of its subsidiary and allied companies.

The resignation of Major Hodgins as District Engineer National Transcontinental Ry., Kenora, Ont., has given rise to a great deal of talk. H. D. Lumsden, Chief Engineer to the Commission, said: "There is always more or less trouble between engineers and contractors over the classification of loose stone excavation and rock, but this was not why Major Hodgins resigned. There was a good deal of friction between the men and Major Hodgins, and I considered that it would be in the interests of the Commission and all parties concerned that he should resign. I therefore asked him to tender his resignation, and he did so. It was accepted by the Commission." S. N. Parent, Chairman of the Commission, in referring to the matter said that the cause of the whole trouble with Major Hodgins and with his assistant engineer, Mr. Heaman, who has also resigned, was that an attempt was made to carry on the work in their division under conditions contrary to the terms of the specifications under which the contracts were let. To change these specifications on the Engineer's sole authority, and allow the contractors the cost of construction with an additional 10% profit on some parts of the contract, instead of compelling them to adhere strictly to the original specifications, was considered by the commissioners neither legal nor in the best interests of the public.

Ed. Porter, for many years connected with the C.P.R. stores department at Winnipeg, died there, Nov. 6, aged 76.

The Judicial Committee of the Privy Council, London, Eng., has dismissed the appeal of the City of Toronto against the C.P.R. and others, respecting the cost of protecting crossings. The Canadian Courts directed that the cost of protecting the crossings at Avenue Road, Bathurst and Dufferin Streets, should be divided between the city and the company, and it was against these decisions that the city appealed.

In an action heard at the Circuit Court, Montreal, recently, Judge Dorion directed the G.T.R. to pay a fine of $8 as provided by the Railway Act for refusal to check baggage. The complainant was H. Beaudry, who has a summer residence at Valois. In Sept., 1906, he bought a trunk in Montreal which he desired to have checked as baggage, but the baggageman contended, as it was new and empty, it was merchandise and compelled the complainant to send it by express. The judge held that the trunk was baggage.

Railway Rolling Stock Notes.

The Intercolonial Ry. is building four new passenger locomotives at its Moncton, N.B., shops.

The Temiskaming and Northern Ontario Ry. Commission has ordered four vans, two baggage and express cars, and two baggage and mail cars.

The Locomotive and Machine Co. of Montreal's output for Oct., included nine C.P.R. 10-wheel locomotives, and nine C.N.R. consolidation engines.

The Temiskaming and Northern Ontario Ry. received the following additions to rolling stock between Oct. 15 and Nov. 15: three workmen's cars and two second-class cars from the Crossen Car Mfg. Co., Cobourg, Ont., and one snowplow.

The specifications of the various cars ordered by the C.P.R. recently, as mentioned in our Nov. issue, have previously been given as follows: Colonist cars, Jan., pg. 17; stock cars, Mar., pg. 165; vans, June, pg. 413; box cars, freight refrigerators, flat and ballast cars, Sept., pg. 657.

The C.P.R., between Oct. 13 and Nov. 12 ordered the following rolling stock: 1 colonist car, 83 box cars, 8 freight refrigerator cars, 8 stock cars, 37 flat cars, and 1 Hart ballast car, from its Angus, Montreal, shops; 2 vans from its Farnham, Que., shops; and 4 steel coal cars from the Dominion Car and Foundry Co., Montreal.

The C.P.R. between Oct. 13 and Nov. 12 received the following additions to rolling stock: 466 box cars, 3 first-class cars, 3 passenger locomotives, Pacific type, and 1 switching engine from its Angus, Montreal, shops; 12 vans and 1 superintendent's business car, from its Farnham, Que., shops; 6 locomotives, passenger and freight, from the Locomotive and Machine Co. of Montreal, and 853 box cars from the U.S.

The Toronto, Hamilton and Buffalo Ry. has ordered from the Locomotive and Machine Co. of Montreal, one 10-wheel passenger locomotive, one 10-wheel freight locomotive, and one switching engine, to the following specifications:

	Passenger.	Freight.	Switching.
Weight on drivers	139,500 lbs.	107,000 lbs.	121,000 lbs.
Total weight	183,000 lbs.	141,000 lbs.	121,000 lbs.
Diameter of drivers	73 ins.	60 ins.	51 ins.
Cylinders	20 by 26 ins.	19 by 26 ins.	19 by 26 ins.
Boiler, type	Ext. wagon top	Ext. wagon top.	Straight top.
Boiler, working pressure	200 lbs.	200 lbs.	180 lbs.
No. and diameter of tubes	336—2 ins.	279—2 ins.	259—2 ins.
Length of tubes	15 ft. 0½ in.	14 ft.	11 ft.
Firebox, length	102 ins.	96 ins.	102 ins.
Firebox, width	65¼ ins.	41 ins.	33 ins.
Wheel base, driving	15 ft. 10 ins.	14 ft.	11 ft. 6 ins.
Wheel base, engine	26 ft. 10 ins.	24 ft. 7 ins.	11 ft. 6 ins.
Wheel base, total, with tender	55 ft. 6 ins.	52 ft. 0¼ ins.	37 ft. 5½ ins.
Tank capacity, U.S. gallons	5,500	5,000	3,500
Coal	9 tons	9 tons	5 tons
	Walschaert valve gear.		

The Canadian Northern Ry. between Oct. 15 and Nov. 15 received the following additions to rolling stock: 8 stock cars and one mail and express car, from the Crossen Car Mfg. Co., Cobourg, Ont.; 100 box cars, 3 coaches and 3 refrigerator cars, from Rhodes, Curry & Co., Ltd., Amherst, N.S.; 2 consolidation locomotives from the Canadian Locomotive Co., Kingston, Ont.; 8 consolidation locomotives from the Locomotive and Machine Co., Montreal; and 50 steel ore cars, from the Dominion Car and Foundry Co., Montreal.

The Hart-Otis Car Co., Ltd., Montreal, has sold to the Atikokan Iron Co., Ltd., Port Arthur, Ont., six Otis all steel dump cars, to the following specification: Length over end sills, 38 ft. 10 ins.; length inside, 36 ft. 9½ ins.; width, inside, 9 ft. 7 ins.; width, extreme, 10 ft. 0¼ in., height from rail to floor line, 4 ft. 4½ ins.; height of sides, 4 ft. 6 ins.; height from rail to top of sides, 8 ft. 10½ ins.; bottom composed of 12 doors, working in quarter sections of three doors each; body, all steel; underframe, built up box girder throughout length of car; M.C.B. couplers; trucks, 5 ft. 6 ins. wheel base; Simplex truck bolster, 50 tons capacity.

Following is the specification for the three steel coal cars of the Otis type, being built for the C.P.R. by the Dominion Car and Foundry Co: Length over buffers, 39 ft. 10 ins.; length between end sills, 38 ft. 1½ ins.; length over end sills, 38 ft. 10 ins.; length of car, inside body, 36 ft. 9½ ins.; width of car over angles at top, 10 ft. 0¼ in.; width of car inside, 9 ft. 7 ins.; height from rail to top of body, 8 ft. 10½ ins.; to top of brake mast, 9 ft. 9½ ins.; to top of center sills, 4 ft. 4¼ ins.; to center of coupler, 2 ft. 10½ ins.; capacity, 100,000 lbs; Westinghouse air brakes with 10 ins. cylinders; tower couplers, Susemihl roller side bearings. The drop doors comprise nearly the entire bottom of the car except the area over the center sills, so that the cars are practically self-cleaning when dumped.

Following is the specification for the new locomotive, class N.3a, which the C.P.R. is having built at its Angus shops, for delivery Mar. 15, 1908: Type, consolidation, 2-8-0; Vaughan-Horsey simple superheater; weight on drivers, 200,000 lbs.; total weight, 230,000 lbs.; diam. of cylinders, 24 ins.; stroke, 32 ins.; diam. of drivers, 63 ins.; type of boiler, radial stayed, wagon top; working pressure, 180 lbs.; heating surface, 2,780 sq. ft.; tubes, 24-5 ins., 272-2 ins.; tubes, outside diam., 2 ins. and 5 ins.; length, 15 ft. 2¾ ins.; firebox, length, 8 ft. 5⅜ ins. inside; width, 5 ft. 9¾ ins. inside; grate area, 49 sq. ft.; tank capacity, 5,000 imp. galls.; coal capacity, 10 tons; air brakes, Westinghouse; axles, open hearth steel; brake beams, Simplex, trussed for tender; brake shoes, C.P.R. standard; couplers, Tower; pilot, Tower tender; headlight, Pyle National Electric; journal bearings, C.P.R. standard; safety valves, 3 ins.; springs, C.P.R. crucible steel; steam gauges, graduated vertical reading dial, 6¾ ins. diam.; tyres, driving wheels, truck wheels, tender wheels, Krupp crucible steel; driving wheel centers, cast steel; truck wheel centers, cast steel tender wheel centers, wrought iron disc.

In our September issue we published an illustrated description of three motor cars built for the Intercolonial Ry. at its Moncton shops. Another motor car has been imported from Europe for this line. It has seats for 40 passengers, including eight in a smoking compartment. A baggage room 7 ft. long is also provided. At the forward end of the car is a compartment 7 ft. long, which contains the steam generator, control levers and all accessory apparatus. The rear end of the car is vestibuled. The car is handsomely finished in hardwood and the seats are upholstered in leather; it is heated by steam and lighted by acetylene. The outside of the car is of steel. The car is propelled by a 120-h.p. steam motor, which is mounted in the forward truck of the car and which drives on the rear axle thereof. This motor is of the inclosed type, so that all parts thereof are free from external influences. The working parts operate in an oil bath, thus insuring continuous and perfect lubrication. The steam generator is mounted in the motor-

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BURNHAM, WILLIAMS & CO., Philadelphia, Pa., U. S. A.
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Including
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ELECTRIC TRUCKS

STANDARD STEEL WORKS

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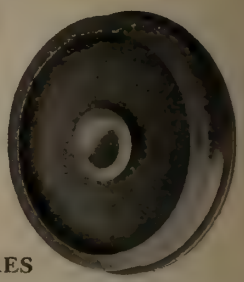
SOLID FORGED ROLLED WHEELS
mounted on axles and fitted with Motor Gears for Electric Railway Service



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man's compartment. It is of light and compact construction, 42 inches in diameter and about 4 ft. high. The design is such that all parts in contact with fire and water can be quickly exposed for cleaning and repairs. Following is a record of a test trip of this car, no. 228, from Moncton to Harcourt and return, a distance of 74 miles, one mile being allowed for turning on the Y at Adamsville, making a total of 75 miles: Left Moncton, 9.33; arrived Harcourt, 10.38; elapsed time, 1 hr. 5 minutes; less 2 stops, 3 minutes; net, 1 hr. 2 minutes. Average speed per hour, 35.8 miles. Left Harcourt, 11.12; arrived Moncton, 12.42; elapsed time, 90 minutes; less detention en route, 26 minutes; making the return trip in 64 minutes. Average speed per hour, 34.7 miles. Total coal consumed for trip, 925 lbs. Average coal consumed per mile, 12.33 lbs.

DOMINION CAR AND FOUNDRY COMPANY.

At the beginning of the current year this company working on the following orders received during 1906: 500 Otis type drop bottom coal cars, 50-ton capacity, and 75 forty-ton hopper bottom ore cars for the C.P.R.; 1,500 steel underframes for the Quebec, Montreal and Southern Ry., 30 ton box cars.

Following are particulars of the principal orders received by the company during the current year: Feb. C.P.R., 36 steel underframe flat cars for unloaders, 30 ft. 5 ins. long, 10 ft. wide, special equipment including: Couplers, Tower; air brakes, Westinghouse; side bearings, Susemihl; journal boxes, McCord; truck bolsters and brake beams, Simplex; brasses, Canadian bronze. 500 Otis self-clearing all-steel drop bottom gondola cars, 50-ton capacity, special equipment including: Couplers, Tower; air brakes, Westinghouse; side bearings, Susemihl; journal boxes, McCord; brasses, Canadian bronze; wheels, 750 lbs.; truck bolsters, Simplex; brake shoes, steel back; brake beams, Simplex.

Mar. Winnipeg Electric Ry., 5 steel underframes for street cars, 41 ft. 0⅞ ins. long over sills.

Mar. C.P.R., 100 all-steel hopper bottom cars, 50-ton capacity; length, 28 ft. 8 in., with four doors dumping centrally. Special equipment including: Couplers, Tower; air brakes, Westinghouse; side bearings, Susemihl; journal boxes, McCord; truck bolsters, Simplex; brasses, Canadian bronze; brake beams, Simplex.

April. Canadian Northern Ry., 50 all-steel hopper bottom cars, 50-ton capacity, same as the 100 cars ordered by C.P.R. in March. 2 steel underframe flat cars for unloaders, length 30 ft. 5 in.

April. Montreal St. Ry., 10 steel underframes.

May. Temiskaming and Northern Ontario Ry., 100 steel underframe flat cars, 50-ton capacity, length 36¾ ft., width 9¼ ft. over flooring. Special equipment includes: Couplers, Tower; air brakes, Westinghouse; side bearings, Susemihl; journal boxes, McCord; brasses, Canadian bronze; truck bolsters, Simplex; wheels, 700 lbs.; brake beams, Simplex.

June. Canadian Northern Ry., 100 steel underframe flat cars, 30-ton capacity. Special equipment includes: Couplers, Latrobe; air brakes, Westinghouse; side bearings, Susemihl; journal boxes, McCord; truck bolsters, Simplex; brake beams, Simplex.

July. C.P.R., 54 all-steel hopper bottom cars, 50-ton capacity, duplicates of those ordered in April.

Aug. C.P.R., 8 Otis type drop bottom gondola cars, duplicates of those ordered in March.

The Otis type cars mentioned above were built under license from the Dominion Dump Car., Ltd., now the Hart-Otis Car Co., Ltd.

TRANSPORTATION APPOINTMENTS.

Canadian Northern Quebec Ry.—A. Seguin, heretofore outside agent for the Canadian Transfer Co., Montreal, has been appointed contracting freight agent there for the C.N.Q. Ry.

Canadian Northern Ry.—H. McLeod, heretofore road foreman mechanical department, Port Arthur, Ont., to Winnipeg, Man., has been assigned to other duties.

E. H. Williams, heretofore locomotive foreman at Humbolt, Sask., has been given special duties at Winnipeg.

W. A. Walker has been appointed locomotive foreman at Dauphin, Man., succeeding F. Wilson, appointed locomotive foreman at Humbolt, Sask.

J. Kyle has been appointed Master Mechanic at Edmonton, Alta.

Canadian Pacific Ry.—H. E. Macdonald, heretofore General Freight Agent Kootenay and Boundary districts, British Columbia, at Nelson, B.C., has been appointed General Freight Agent, Atlantic Division, succeeding W. M. Kirkpatrick, transferred to Toronto. Office, St. John, N.B.

The office of Engineer of Maintenance of Way, heretofore held by A. L. Hertzberg, has been abolished and the duties will in future be performed by the Assistant Chief Engineer, F. P. Gutelius, who was formerly Engineer of Maintenance of Way.

L. O Armstrong, Colonization and Tourist Agent at Montreal, has had some industrial work added to his duties, but up to Nov. 25 no circular had been issued respecting the same. A press report states that he has been appointed Industrial Agent, that the office has been changed into three divisions, viz., industrial, colonization and sports, and that J. A Hope has been appointed assistant in the sports branch.

J. M. R. Fairbairn, heretofore Division Engineer Ontario Division, has been appointed Division Engineer Eastern Division, succeeding J. H. Barber, resigned. Office, Montreal.

R. W. McCormick, heretofore Assistant Superintendent district 2, Eastern Division, at Montreal, has been appointed Assistant Superintendent district 4, Eastern Division, at Ottawa. The position of trainmaster, district 4, heretofore held by D. Robertson, who has been in ill-health recently, has been abolished.

W. B. Cronk, heretofore Inspector of Transportation, reporting direct to the Assistant General Manager, has been appointed Assistant Superintendent district 2, Eastern Division, succeeding R. W. McCormick, transferred. Office, Smith's Falls, Ont. The office for the district was heretofore at Montreal.

W. K. Thompson, heretofore Superintendent at White River, Ont., has been appointed Superintendent district 1, Ontario Division, Toronto, succeeding J. R. Nelson, transferred. Office, Toronto.

J. R. Nelson, heretofore Superintendent district 1, Ontario Division, Toronto, has been appointed Superintendent district 3, Ontario Division, succeeding A. L. Smith, transferred. Office, Toronto.

A. L. Hertzberg, heretofore Engineer of Maintenance of Way, has been appointed Division Engineer, Ontario Division, succeeding J. M. R. Fairbairn, transferred. Mr. Hertzberg held the position of Division Engineer at Toronto prior to his transfer to Montreal. Office, Toronto.

W. M. Kirkpatrick, heretofore General Freight Agent, Atlantic Division, has been appointed General Freight Agent, Ontario Division, in charge of through traffic. Office, Toronto. M. H. Brown remains as General Freight Agent in charge of local traffic as at present. We are advised that the increase in the company's mileage and in its business generally has made the additional appointment necessary. Mr. Kirkpatrick will have supervision over all freight traffic and Mr. Brown immediate supervision over local traffic.

A. L. Smith, heretofore Superintendent district 3, Ontario Division, Toronto, has been appointed Superintendent district 2, Lake Superior Division, succeeding W. K. Thompson transferred.

A. A. Sheppard has been appointed acting Locomotive Foreman at Schrieber, vice G. F. Morton, transferred to other duties.

R. R. Jamieson, heretofore General Superintendent, Western Division at Calgary, Alta., has been appointed General Superintendent Central Division, vice A. Price, transferred. Office, Winnipeg.

W. H. Robertson has been appointed Assistant General Freight Agent at Winnipeg, Man.

A. Price, heretofore General Superintendent Central Division at Winnipeg, has been appointed General Superintendent Western Division, vice R. R. Jamieson transferred. Office, Calgary, Alta. District 5, central division, embracing the main line from Broadview to Swift Current, Sask., and the branch lines from North to Patqua, and from Arcola to Regina, has been transferred from the central to the western division.

G. A. Walton, heretofore station ticket agent, Winnipeg, has been appointed District Passenger Agent in charge of the Central Division west of Winnipeg. Office, Brandon, Man.

A. Shortt, heretofore machine shop foreman, Calgary, Alta., has been appointed general foreman there, succeeding S. Newmarch, resigned.

R. D. Smith, heretofore District Master Mechanic Western Division, Cranbrook, B.C., has been appointed road foreman of engines district 1, Western Division.

G. Glasford has been appointed District Master Mechanic at Cranbrook, B.C., succeeding R. D. Smith.

W. C. Bowles, heretofore Assistant General Freight Agent at Vancouver, B.C., has been appointed General Freight Agent Kootenay and Boundary Districts, succeeding H. E. Macdonell, transferred. Office, Nelson, B.C.

G. H. Smith, heretofore Assistant General Freight Agent at Winnipeg, has been appointed Assistant General Freight Agent Pacific Division. Office, Vancouver, B.C.

Canadian Pacific Ry., Minneapolis, St. Paul and Sault Ste. Marie Ry., Duluth, South Shore and Atlantic Ry.—The following circular was issued jointly by W. R. MacInnes, Freight Traffic Manager C.P.R., W. L. Martin, Second Vice-President and Traffic Manager M., St. P. and S.S.M. Ry., and W. W. Walker, General Freight Agent D.S.S. and A. Ry.: "It is with the deepest regret that we must announce the death of F. W. Salsbury, who so ably represented our lines in Pittsburg for many years. His loss is felt very keenly by us in both a business and personal way. Mr. Salsbury will be succeeded by Robt. Main as Commercial Agent." Office, 320 Fifth Ave., Pittsburg, Pa.

O. Townsend has been appointed Travelling Freight Agent in the Pennsylvania-West Virginia territory, succeeding R. Main, promoted. Headquarters, Pittsburg, Pa.

Central Vermont Ry.—J. W. Hanley, heretofore chief clerk in the Passenger Department, has been appointed General Passenger Agent, succeeding J. E. Bentley, who has been appointed special agent to perform such duties as may be assigned to him by the General Manager or General Freight Agent. Office, St. Albans, Vt.

W. Kennedy, heretofore Master Mechanic G.T.R., Toronto, has been appointed Superintendent of Motive Power, C.V.R., succeeding A. Buchanan, Jr., resigned. Office, St. Albans, Vt.

INTERCOLONIAL RAILWAY

INTERCOLONIAL RAILWAY

THE OCEAN LIMITED

FIRST TRIP June 30

LAST TRIP Sept. 10 1907

No. 200	WILL LEAVE	No. 199
Daily except Saturday, - Montreal,	19.30	Daily except Sunday, - Halifax, 8.45
Daily except Sunday, - - Levis,	24.10	Daily except Sunday, - St. John, 11.00
	WILL ARRIVE	
Daily except Sunday, - St. John,	17.30	Daily except Monday, - - Levis, 2.50
Daily except Sunday, - Halifax,	20.15	Daily except Monday, - Montreal, 7.30

FIRST TRIP June 29

LAST TRIP Sept. 10 1907

Only One Night on the Road

Between Western Ontario and St. John, Halifax, etc.—saving hours of time.

Through Sleeping Cars between Montreal, St. John and Halifax—DINING CAR SERVICE UNEQUALLED

Daylight Views of the Matapedia & Wentworth Valleys. Direct Connection with Prince Edward Island.

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CATALOGUE WILL BE SENT ON APPLICATION

DOMINION IRON AND STEEL CO.

LIMITED

MANUFACTURERS OF

BASIC OPEN HEARTH STEEL RAILS

Order Books are now open for delivery during 1908. Intending Purchasers should place orders early to insure prompt delivery.

HEAD OFFICE AND WORKS: **SYDNEY, CAPE BRETON, CANADA**

W. E. Costello, heretofore Assistant Superintendent Oregon Short Line, and previously with the G.T.R. at Stratford, London, Ont., and Battle Creek, Mich., has been appointed Superintendent C.V.R. Southern Division, at New London, Conn., succeeding E. D. Nash, who has resigned to go to Panama in charge of operation of a line for the United Fruit Co.

Detroit River Tunnel.—W. G. Wilgus, heretofore Vice-President New York Central Lines, has been retained as Consulting Engineer of the D.R.T.

Dominion Atlantic Ry.—T. R. Ronald, it is reported, will succeed the late C. Fitch Kemp as President, and will be succeeded as Vice-President by Col. J. M. Denny.

Grand Trunk Pacific Ry.—We are informed that there is no foundation for the press reports referred to in our Nov. issue that R. Watchorn, Montreal, had been appointed Purchasing, Fuel and Labor Agent there for the G.T.P.R.

W. J. Hunter, Commercial Agent G.T.R., Winnipeg, has been appointed Division Freight Agent G.T.P.R. Office, Winnipeg.

Grand Trunk Ry.—W. Gell, heretofore locomotive foreman at Sarnia Tunnel, Ont., has been appointed Master Mechanic Ottawa Division, succeeding J. R. Donnelly, transferred. Office, Ottawa.

J. R. Donnelly, heretofore Master Mechanic Ottawa Division, has been appointed Master Mechanic Northern Division, succeeding J. Markey, transferred. Office, Allandale, Ont.

J. Markey, heretofore Master Mechanic Northern Division, has been appointed Master Mechanic Middle Division, succeeding W. Kennedy, appointed Superintendent Motive Power Central Vermont Ry. Office, Toronto.

R. J. Cottrell, heretofore charge hand at St. Thomas roundhouse, has been appointed locomotive foreman at St. Thomas, Ont., succeeding W. H. Towner, transferred.

W. H. Towner, heretofore locomotive foreman St. Thomas, has been appointed locomotive foreman Sarnia Tunnel, succeeding W. Gell, promoted.

W. D. Hall has been appointed Superintendent in charge of Power Plant and Electrical Equipment, St. Clair Tunnel. Office, Port Huron, Mich.

The following agents have been appointed: Lacolle Jct., Que., R. Fortin (Acting); Barrington, Que., Mrs. F. I. Clayland; St. Agnes, Que., A. Martel; Keene, Ont., H. B. Nelson (Acting); Newmarket, Ont., R. C. Fair; Sundridge, Ont., H. J Quinlan; Elmvale, Ont., C. A. Caldwell; Swanton, Vt., W. J. Cronin; Killaloe, Ont., H. P. Toop; Wilno, Ont., R. J. Hardy; Ravensworth, Ont., W. H. Woodruff.

E. H. Boynton has been appointed New England Passenger Agent, succeeding T. H. Hanley, resigned to engage in other business. Office, 360 Washington St., Boston, Mass.

Great Western Ry. of England.—E. W. Burch, heretofore assistant to the District Goods Manager at Gloucester, Eng., has been appointed General Agent for Canada for the purpose of developing freight and passenger traffic. For the present his headquarters are at the King Edward Hotel, Toronto.

Intercolonial Ry.—A. T. Weldon has been appointed Division Freight Agent at Halifax, N.S., succeeding D. A. Story, assigned to other duties.

Merchants' Despatch, etc.—A joint circular issued by F. La Bau and G. H. Ingalls, Freight Traffic Managers New York Central Lines; A. S. Crane, Assistant Freight Traffic Manager Boston and Maine Rd.; B. H. Bail, General Freight Agent, Philadelphia and Reading Ry., and T. B. Koons, Freight Traffic Manager Central Rd. of New Jersey, on behalf of the New York Central and Hudson River, West Shore, Boston and Albany, Rutland, Lake Shore and Michigan Southern, Michigan Central, Cleveland, Cincinnati, Chicago and St. Louis, Pittsburg and Lake Erie, Peoria and Eastern, Lake Erie and Western, Chicago, Indiana and Southern, Boston and Maine, and the Philadelphia and Reading Railways, and the Central Rd. of New Jersey, announces that Carl Howe has been appointed Manager, and W. F. Wilson Assistant Manager, of the Merchants' Despatch, Red Line, Blue Line, White Line, North Shore Despatch, West Shore Line, Rutland-Michigan Central Line, Jersey Central-Lake Shore Despatch and Jersey Central-Michigan Central Despatch, with office at Buffalo, N.Y. The position of Traffic Manager of the Merchants' Despatch Transportation Co. in New York, heretofore held by Mr. Howe, has been abolished.

W. B. Pollock, Vice-President and General Manager of the Merchants' Despatch Transportation Co. has issued the following announcement Oct. 25: "On and after Nov. 1, 1907, this company will cease to operate the Merchants' Despatch and Dairy Line and thereafter they will be operated by the New York Central Lines. This company having, as of Nov. 1, 1907, sold to the New York Central and Hudson River Rd. Co. its ice houses and contents at East Buffalo and Karner, N.Y., and to the Lake Shore and Michigan Southern Ry. Co. its ice house and contents at West Seneca, N.Y., and to the Michigan Central Rd. Co. its ice house and contents at (Junction Yards), Detroit, Mich., the icing of perishable freight at those points on and after Nov. 1, will be performed by the railroad companies." Mr. Pollock has also issued the following notice: "This company having sold, as of Nov. 1, all of its box and carriage cars to the New York Central and Hudson River Rd., and Lake Shore and Michigan Southern Ry. companies, the allowance for use of such cars must thereafter be reported to those companies."

Transcontinental Ry. Commission.—S. R. Poulin, heretofore District Engineer at North Bay, has been appointed District Engineer at Kenora, Ont., succeeding Major Hodgins, resigned.

C. O. Foss, heretofore Assistant District Engineer at St. John, N.B., has been appointed Assistant District Engineer at Kenora, succeeding A. F. Heaman, resigned.

Wisconsin Central Ry.—H. S. Head has been appointed District Passenger Agent, with headquarters at 290 Broadway, New York City. His territory includes all the territory lying east of Buffalo in the United States, and the Canadian territory lying east of Toronto.

Railway Commissioners' Traffic Orders.

3925. Nov. 13.—In the matter of the application of the Canadian Manufacturers' Association and the shippers who were heard and represented at the hearings held by the Board in Windsor and Chatham, Ont., in May, 1906, and of the Toronto Board of Trade. Whereas, by Order no. 3258, dated July 6, 1907, the Board directed that certain revised tariffs of freight tolls were to be prepared, and published and filed by the railway companies; and whereas it has decided to fix a date upon which the said tariffs shall come into force; upon the report of the Chief Traffic Officer of the Board—The Board orders that the revised tariffs of freight tolls referred to in Order 3258 be, and they are hereby, ordered to come into force, from points in Canada, not later than Jan. 1, 1908.

National Transcontinental Railway.

The report of the Transcontinental Ry. Commission for the nine months ended Mar. 31, is referred to in the report of the Department of Railways and Canals. From the summary given it appears that the total amount expended during the nine months was $5,537,867.50, which with the $2,609,627.13 previously expended, makes total payments of $8,147,494.63. It is stated that the various surveys carried on have produced satisfactory results, and that the basal intention that the railway throughout should be so located as to afford grades of exceptional ease in operation not exceeding 0.40% against eastbound and 0.60% against westbound traffic, and curves of the greatest possible radius has been closely regarded, though the endeavor to meet this requirement has, of course, entailed much additional survey work. Connected lines of survey have now been obtained for the entire distance between Moncton and Winnipeg. Contracts for construction have been awarded for 852 miles.

The report of C. Schrieber, Consulting Engineer to the Department, is published in full, and is summarized as follows by the Deputy Minister: "On the Western Division of the railway to be built by the G.T. Pacific Ry., Mr. Schrieber's report shows the position up to Mar. 31. Surveys have been completed and the plans and profiles of location have been approved by orders-in-council from about 32 miles west from Winnipeg to Edmonton. From Edmonton to 27 miles west of Yellowhead Pass location plans and profiles have been approved; but may be revised as improvements develop. The balance of the line to Prince Rupert, the proposed terminus on the Pacific Coast, has been located, and plans and profiles submitted; but an improved revision was expected. The Chief Engineer states that a very good location has been made, only one grade exceeding 4-10 of 1%; the exception being a 1% grade for about 20 miles. The work, for mountainous work, will not be heavy, except for about 170 miles east from Prince Rupert, where it will be almost entirely very heavy rock excavation. The construction under contract and progress is from Portage la Prairie, 275 miles westward, on which about 75% of the grading was done, and about 60% of the culverts, bridges, etc., a further distance of 141 miles to a short distance west of the crossing of the South Saskatchewan River, on which 48% of the grading and about 38% of the entire work was done. For a further distance of about 316 miles to Edmonton about 25% of the grading was done. The bridges over the Assiniboine, the South and North Saskatchewan, and the Battle rivers, are under contract. The severity of the last winter greatly interfered with construction, with regard to tracklaying, though steel rails of 80 lbs. to the yard have been delivered for the whole distance from Winnipeg to Edmonton, 800 miles. The shortage of ties has delayed tracklaying, only 36 miles of track being laid to Mar. 31. About 36 miles of telegraph line have been erected."

The Commissioners visited Moncton, N.B., Nov. 8, for the purpose of considering the question of the terminals necessary there. They returned to Ottawa on the following day, and will confer with the Minister of Railways upon the subject.

The Commissioners have filed with the Registrar of Deeds for the County of L'Islet, route plans for the railway from mileage 89 to 130, from the north abutment of the Quebec Bridge, easterly through the County of L'Islet.

Reports received at Ottawa state that about 50 miles of track have been laid on the Quebec section, and that grading on the sections

Canadian Northern Ontario Railway

CANADIAN NORTHERN ONTARIO

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Deer—Moose—Bear—Partridge—Duck

The Canadian Northern Ontario opens up a new country—the best hunting on the Continent. Beside Muskoka Lakes, Georgian Bay, innumerable water-ways north of Parry Sound, including the Shawanaga, Magnetawan and Still Rivers, hitherto almost inaccessible, more Deer come out of this section than from the rest of Canada. Partridge, Duck and small game in abundance.

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Axles, Crank Pins, Forgings, Etc.

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under contract is well advanced. Tenders for the greater part of the remaining 1,000 miles between Winnipeg and Moncton will, it is said, be called for in the spring. The portion of the line in Northern Ontario adjacent to the Temiskaming and Northern Ontario Ry. will probably be the last to be constructed, as tenders are not expected to be called for until the T. and N.O.R. is extended to the proposed point of junction.

GRAND TRUNK PACIFIC RAILWAY.

F. W. Morse, Vice-President and General Manager, recently completed a trip of inspection over the whole main line, and the Lake Superior branch. Fifty miles of track had been laid on this branch, and grading is reported to be progressing favorably. The Macdonald, McMillan Co. have completed their contract for grading from Portage la Prairie to the Touchwood Hills, 272 miles, and the Canadian White Co. is finishing up its contract for grading into Saskatoon, Sask. The grading between Saskatoon and Edmonton is also well forward, and it was expected that by Nov. 30, 600 miles of the 770 between Portage la Prairie and Edmonton would have been graded. It is expected that track will be laid into Saskatoon by the end of the year, but this depends entirely upon favorable weather. On Nov. 12, the steel-laying gang working westerly was reported to be on Sec. 5, about 20 miles south of Yorkton. Steel is also being laid easterly from Saskatoon, from which point 100 miles of grade has been fully completed. On Nov. 12, the tracklaying gang was working some miles east of French.

The substructure for the big bridge across the Saskatchewan River at Saskatoon has been completed, and the contractors have removed their plant to the Battle River, where another large bridge is to be constructed. The substructure consists of nine piers and two abutments in which there are 7,000 cubic yards of concrete. The false work is being erected and a large quantity of the steel for the superstructure has been delivered. The contractor for the steel work is the Canadian Bridge Co., Walkerville, Ont., and J. Gunn & Sons were the contractors for the substructure.

The route finally adopted for the line west of Edmonton, Alta., runs parallel with the Canadan Northern Ry., to near Stoney Plain. It skirts the shores of Wabamum Lake, 40 miles west, then to the Pembine River, crossing it several miles west of the mouth of the Lobstick River, and runs along the bank of that river until near Lobstick Lake. South of the lake the line runs along the valley following pretty nearly the old Yellowhead Pass trail, but crossing Upper Lobstick River, Carrot River, a branch of the McLeod, the Wolf, and crossing the McLeod a few miles below the Jasper trail crossing at White Mud creek, west along the south bank of the McLeod, beyond the big eddy, to within a mile of Leavings, the name given to the dividing land that separates the McLeod watershed from the Athabasca, the line traverses valley land. On this divide of the two rivers the G.T.P. strikes a heavy grade and winds over a hill, 3,470 ft. high. The line strikes the Athabasca River about three miles up from the mouth of Train Creek, and then runs through a beautiful valley to the Roche Miette, the first mountain the old Jasper trail crosses. Here there is an excellent grade to climb to the pass, the line winding up the river valley. At a meeting of the Commissioners at Ottawa, Nov. 12, it was reported that 10 parties were in the field locating the route from the Yellowhead Pass to the coast. These parties will remain in the field during winter. C. Van Arsdol, engineer in charge of the Western Division, returned to Vancouver, B.C., Nov. 2, after having gone over the route of the line from Prince Rupert easterly to Barkerville, B.C. He said alternative routes had been surveyed in various sections, and it would take some time to decide as to the final route to be followed. (Nov., pg. 839).

Department of Railways Expenditures.

The Dominion Parliament, in 1906, passed an Act respecting the fiscal year, enacting that it should extend from April 1 to Mar. 31, both inclusive, consequently the reports of the various departments which are now being issued cover nine months only, viz., from July 1, 1906, to Mar. 31, 1907, the previous reports having covered the 12 months ended June 30, 1906.

During the nine months ended Mar. 31, 1907, the Department of Railways and Canals made a total railway expenditure of $14,918,598.92, of which $7,174,370.17 was charged to capital, $6,328,745.65 to revenue, and $1,415,483.10 to income. The expenditure on capital included $5,537,867.50 for the National Transcontinental Ry. The expenditure on income included $1,323,367.48 paid as subsidies to railways other than Government roads, also $68,664.29 for the Board of Railway Commissioners. The expenditure on the Intercolonial Ry., including the Windsor branch $15,425.32, charged against revenue, was $7,551,806.41, of which $1,506,209.26 was on capital, and $6,045,597.15 on revenue account. The expenditure on the Prince Edward Island Ry. was $374,859.02, of which $91,710.52 was on capital and $283,148.50 on revenue account. The total Government expenditure on railways prior to and since Confederation amounts on capital account to $162,050,456.79, which includes $25,000,000 granted the C.P.R. for its main line. In addition there has been expended from the consolidated fund, $167,210,490.44, which includes $35,578,502.54 paid as railway subsidies in addition to the amount to the C.P.R., making a total expenditure of $329,260,947.23. This amount does not include the annual payment of $119,700 to the Quebec Government, under chap 8, 47 Vict., nor the annual payment of $107,730 in respect of the Ottawa-Quebec line transferred to the public debt as a liability and dealt with by the Finance Department. Of the total amount named, $13,881,460.65 was expended on construction works prior to Confederation on portions of what is now the Intercolonial Ry. system. The total revenue received from the Government railways from July 1, 1867, to Mar. 31, 1907, was $118,819,364.19. The financial statement and general statistics are given under the separate headings of the Intercolonial Ry. and the Prince Edward Island Ry. on pg. 895.

During the nine months ended Mar. 31, subsidy contracts were entered into with six companies for the construction of 248 miles of railway, and $1,324,889.30 was paid to the following companies under subsidy agreements:

Atlantic and North-West Ry.	$ 186,600.00
Bay of Quinte Ry.	72,602.45
Brockville, Westport and Sault Ste. Marie Ry.	35,600.00
C.P.R. Staynerville branch	9,600.00
Chateauguay and Northern Ry.	84,224.75
Halifax and Southwestern Ry.	268,107.20
International Ry. of New Brunswick.	51,200.00
James Bay Ry.	420,608.00
Klondike Mines Ry.	96,000.00
Middleton and Victoria Beach Ry.	27,667.20
Midland Ry.	4,967.70
Quebec and Lake St. John Ry.	67,712.00
	$1,324,889.30

The sum of $1,521.82, refunds in connection with subsidy payments to the Atlantic and Lake Superior Ry., makes the net payments $1,323,367.48.

It has been decided to connect Tofield, Sask., with other neighboring points by telephone.

C. P. R. Betterments, Construction, Etc.

Place Viger Freight Yards.—Excavation has been going on since Nov. 1 for the new freight sheds adjoining Place Viger station, Montreal. The site of the sheds is between Panet and Amherst Sts., and the total area to be occupied by the sheds and the tracks leading into and through them is about four acres.

Vaudreuil-St. Anne's Second Track.—Reconstruction work upon the bridges at Vaudreuil and St. Anne's, Que., was expected to be completed by Nov. 30. The new bridges are double-track structures.

Bridge at Hanover.—A wooden bridge to cross the G.T.R. tracks at Hanover, Ont., is under construction at a cost of about $18,000.

Walkerton and Lucknow Ry.—Good progress is being made with the construction of this line. The contractors received a bit of a check Oct. 23, when several rods of the completed track in the vicinity of Proton, Ont., sank. As the construction train was on the far side of the break, work was delayed for some days while repairs were made. An indenture of lease, dated Nov. 12, 1906, between the W. and L. Ry. Co. and the C.P.R., has been deposited with the Secretary of State at Ottawa, under the provisions of Sec. 361 of the Railway Act.

Manitoba and North-Western Ry.—Surveys are being made for the construction of a projected branch from Theodore, to connect with the Russell branch in tp. 20 or 21, range 28, west of the principal meridian. This line would serve the Round Plains district.

Saskatoon Improvements.—The company has completed the purchase of some additional properties on Third St., Riversdale, Saskatoon, adjoining the properties previously purchased. A 12-stall roundhouse is in course of erection, and considerable progress has been made with laying out the yards.

Saskatoon Westerly.—Recent reports state that grading has been completed westerly from Saskatoon to within a few miles of Hardisty, Alta., to which point the branch easterly from Wetaskiwin is in operation. Tracklaying has been suspended on the line, and the steel which was taken in has been taken east, and is being laid on the line into Saskatoon, the object being to complete the line eastward first. The grading into Hardisty is not expected to be completed this season, but it is expected that the line will be finished and opened for traffic in 1908.

Moose Jaw-Lacombe Branch.—The C.P.R. has purchased a section of school lands west of Davidson, at the Elbow, Sask., for a townsite. The line now under construction from Tuxford passes through this land.

The grading, etc., from mileage 50 to 123, on the Moose Jaw northwest line, was let in two contracts. A. C. Smith has a contract from mileage 50 to 53, the work to be completed by July 1, 1908; J. D. McArthur has a contract for mileage 53 to 123, the work to be completed by Sept. 1, 1908.

Belly River Bridge.—The first pile for the big bridge over the Belly River at Lethbridge, Alta., was driven Oct. 26, and the work of preparing for the putting in of the concrete substructure is about completed. The whole of the west bank of the river, about 300 feet in height, has to be cut down. Night and day shifts are at work, and the work is being rushed. It is desired to have the bridge completed by the end of 1908.

High Level Bridge at Edmonton.—W. Whyte, Second Vice-President, on his return to Winnipeg Nov. 5 from Edmonton, Alta., said all details in connection with

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the entrance of the C.P.R. into the city had been settled, and work on the substructure of the high level bridge over the Saskatchewan River would be carried on during the winter. The local municipalities desired that a joint traffic and railway bridge might be erected, and negotiations to this end had been in progress for many months. Under the plan now agreed to the railway will be carried beneath the general traffic road. Provision will be made in the center of the upper floor of the bridge for tracks for an electric railway. The bridge will be 2,500 ft. long, and will cost about $1 000,000. The cost of construction will be borne by the C.P.R., the Government and the municipalities.

Columbia and Western Ry.—A press report states that the C.P.R. is about to electrify the South Kootenay branch of the C. and W. Ry., with a view of securing the coke, coal and ore haulage. The motive power, it is reported, will be supplied by the West Kootenay Light and Power Co.

Empress Hotel, Victoria.—It is expected that the company's hotel at Victoria, B.C., will be opened early in Jan.

Kootenay Central Ry.—Grading is reported to be in progress upon a 10 mile section immediately south of Golden, B.C., upon this projected railway to connect the C.P.R. transcontinental line with the Crow's Nest Pass Line. The question of the route south of Windermere is giving some concern to the residents, on account of the fact that W. Whyte, Second Vice-President, on his recent trip, did not follow the line of survey originally made. The suggestion is that it is desired to enter the Cranbrook district instead of going direct to Fort Steele.

Esquimalt and Nanaimo Ry.—Tenders have been asked for the clearing and grading of 48 miles of the right-of-way of the extension of the E. and N. Ry. between Alberni and Nanoose.

The work of improving the roadbed and bringing it up to C.P.R. standard is being rapidly pushed forward. Three gangs of men have been at work for some time putting in concrete culverts; the bridge at Waugh's Creek has been renewed, and some 70,000 cubic yards of filling are being put in by a steam shovel gang at Millstream Crossing.

Sumas to Seattle—Spokane to Seattle.—A Tacoma, Wash., press despatch, dated Nov. 20, says it has been announced that the C.P.R. has survey parties in the field locating two lines of railway in Washington State. One of the proposed lines is said to be from Spokane through Yakuna Valley, across the Cascade Mountains to Tacoma and Seattle; and the other is a connecting north and south line from Sumas, on the International boundary, to Seattle and Tacoma. It is also stated that engineers have a coast line permanently located to Deeming, 40 miles south of Sumas, and that the C.P.R. has an option of 200 acres of land alongside deep water, at Tacoma, for terminals. D. C. Corbin, President of the Spokane International Rd., which at present has a connection with the C.P.R. at Yahk, B.C., was in Montreal, Nov. 14, conferring with Sir Thos. G. Shaughnessy, President C.P.R., in connection with railway construction matters in Washington State. A despatch from Bellingham, B.C., announces the arrest of a Canadian survey party working along the Noosack River Valley, towards Seattle. Other press reports state that the C.P.R., or interests allied with it, have acquired the charter of the North Coast Ry., of which R. E. Strathorn, Spokane, is President. The N.C.R. Co. was incorporated several years ago; considerable survey work was done between Spokane and Walla Walla, and some construction work is in progress out from Spokane on Hangman's Creek. Another report respecting the N.C.R. Co. says that "all the negotiations have been concluded and the final surveys are being made preliminary to the actual construction between Seattle and the boundary line near Sumas." (Nov., pg. 827.)

Western Freight and Car Service Bureaus.

The 5th annual meeting of the Canadian Freight Association, Western Lines, Freight Inspection Bureau, was held at Winnipeg, Nov. 18, when the following were elected for the current year: President, G. H. Shaw, General Traffic Manager, Canadian Northern Ry.; Vice-President, W. B. Lanigan, General Freight Agent C.P.R. Freight Inspector and Executive Committee, G. H. Shaw; Manager and Secretary-Treasurer, H. R. Patriarche. The membership of this Association consists of the C.P.R., Canadian Northern Ry. and Alberta Ry. and Irrigation Co.

The Great Northern Ry. (U.S.A.) has been admitted as a member of the Canadian Car Service Bureau Western Lines, and the Bureau's car service committee has been elected as follows: J. A. McGregor, Assistant Superintendent Car Service, C.P.R.; J. McLellan, Superintendent Terminals, C.P.R.; J P. Driscoll, Superintendent Canadian Northern Ry.; A. Wilcox, Superintendent C.N.R.; M. Nicholson, Superintendent Dakota Division Great Northern Ry.; C. Leverich, Superintendent Minot Division G.N.R.; Chairman, H. Patriarche.

Railway Equipment and Appliances.

The Secretary of the Board of Railway Commissioners has issued the following circular to railway companies: "I have by direction to call your attention to the fact that the Board's Inspector reports numerous defects in the equipment and safety appliances used on the trains of the railway companies subject to the jurisdiction of the Board, and the failure on their part to comply with the provisions of the Railway Act in this regard. These reports show that over 30% of the very large number of cars and engines —numbering well into the thousands—which have recently been inspected, are being operated with defective safety appliances. Particular mention may be made in this connection of the large number of cars that are operated daily with defective air brakes. The Board trusts that it may be necessary only to bring this condition of affairs to the notice of the railway companies, to ensure within a reasonable time the necessary improvement being made in these respects, and that the Board will be relieved from taking definite action in the matter."

The Board of Railway Commissioners.

After considering a number of questions in connection with the fixing of forms of returns of operating and other expenses, the adoption of uniform railway rules, and a general plan for the abolition of railway crossings, the Commissioners heard several cases at Ottawa affecting Fort William, Brandon and Vancouver. The Commissioners then visited Hamilton, Ont., where a number of cases in which the Toronto, Hamilton and Buffalo Ry., the Brantford and Hamilton Ry., the G.T.R., and the Hamilton Street Ry. were interested, were heard. No decisions were given out and the Commissioners went on to Chatham, Ont., where some cases were heard Nov. 3. On Nov. 5, the Commissioners opened the sittings at Toronto, at which a large number of questions were taken up, including: The application of the Canadian Northern Ry. to cross Winchester St., Toronto, on the level; the viaduct question in Toronto, and the Toronto Union station matter; the supply of refrigerator cars for fruit; the question of who should pay interswitching charges, and a question of car shortage brought forward on the complaint of the Dominion Millers' Association. A number of minor matters affecting different localities were also taken up. Orders will be issued later.

J. B. McManus Limited, railway contractors, of Memramcook, N.B., have failed, and at a creditors' meeting in Moncton, Nov. 18, made an offer of 40c. on the dollar cash, payable in 10 days. They have a contract for double tracking the Intercolonial Ry. between Moncton and Painsec Jct.

The Board of Railway Commissioners has decided not to make public its inspector's report on the C.P.R. Caledon, Ont., accident, for the present at least, owing to the fact that criminal proceedings are being taken in connection with the accident. The Board has directed its engineering department to examine the line at and near the place where the accident occurred, and to report whether any change should be made therein or any regulation adopted as to speed or otherwise.

THE CANADIAN NORTHERN ONTARIO RAILWAY COMPANY

NOTICE is hereby given that The Canadian Northern Ontario Railway Company will apply to the Parliament of Canada, at its next session, for an Act empowering it to construct and operate a line of railway from a point on its authorized line between Udney and Ruthburn to Orillia.

GEO. F. MACDONNELL,
1 Toronto St., Toronto,
Assistant Solicitor.

Toronto, Ontario, 18th November, 1907.

CANADIAN NORTHERN RAILWAY COMPANY

NOTICE is hereby given that application will be made to the Parliament of Canada, at its next session, for an Act authorizing the construction of the following lines, from:

(a) Humboldt, in Saskatchewan, south-westerly to Calgary;

(b) Brandon-Regina line near west boundary of Manitoba westerly to Lethbridge, Alberta;

(c) North Battleford north-westerly to Athabasca Landing with a branch to Green Lake;

(d) Strathcona, Alberta, southerly to Calgary, with a branch to connect with authorized line from Regina to Red Deer River;

(e) Regina south-westerly to International boundary;

(f) Edmonton to headwaters of McLeod and Brazeau Rivers;

(g) Russell, Manitoba, via Yorkton to authorized line near Goose Lake, Saskatchewan;

(h) South of Neepawa, Manitoba, to main line crossing of South Saskatchewan River;

And extending the time for commencement and completion of the following lines, from:

(a) North of the line between Winnipeg and Ste. Anne to International boundary;

(b) Between Port Arthur and Fort Frances to Quebec, with branches to Port Arthur, Ottawa and Montreal;

(c) Battleford westerly to the Brazeau River;

(d) Regina to Humboldt and via Carrot River to Pas Mission and between Humboldt and South Saskatchewan River to crossing of same river south of Prince Albert.

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Flannery Bolt Co., Pittsburg, Pa.	922
Foster, James, Toronto	950
Fullerton Lumber & Shingle Co., Vancouver, B.C.	948
Galena Signal Oil Co., Franklin, Pa.	874
Gardner, J. T., Chicago	942
Gartshore, J. J., Toronto	944
Gartshore-Thomson Pipe & Foundry Co., Ltd.	942
Goold, Shapley & Muir Co., Ltd., Brantford, Ont	926
Grand Trunk Railway	912
Greening, The B., Wire Co., Ltd., Hamilton, Ont.	950
Hamilton Steel & Iron Co, Hamilton, Ont.	894
Hart-Otis Car Co., Ltd., Montreal	882
Hayes Track Appliance Co., Geneva, N.Y.	916
Holden, N. J. Co., Montreal	932
Hopkins, F. H., & Co., Montreal	882
Hotel Imperial, New York City	916
Hotel Walton, Philadelphia, Pa.	Cover 2
Hudson's Bay Company	908
Hunt, Robert W., & Co., Montreal	936
Hunter-Rose Co., Ltd., Toronto	950
Hutton, James, & Co., Montreal	944
Illinois Central Railroad	946
Imperial Bank of Canada	946
Intercolonial Railway	906
International Correspondence Schools, Chicago	886
International Mercantile Marine Co.	936
Jessop, Wm., & Sons Ltd., Sheffield, Eng.	944
Kelson, The W. H., Co., Montreal	950
Kerr Engine Co. Ltd., Walkerville, Ont.	932
Latrobe Steel & Coupler Co., Philadelphia, Pa.	946
Lewis, Rice & Sons, Toronto	922
Leonard, E. & Sons, London, Ont.	—
Locomotive and Machine Co. of Montreal, Ltd.	880
Mail Job Printing Co., Ltd., Toronto	950
Males, The, Co., New York City	946
McCaskill, Dougall & Co., Montreal	Cover 1
McClintock Mfg. Co., St. Paul, Minn.	914
McConway & Torley Co., Pittsburgh, Pa.	886
McCord & Co., Chicago, Ill.	892
McDougall John, Caledonian Iron W'ks Co., Ltd.	928
McGregor-Banwell Fence Co., Ltd., Walkerville.	938
McKenzie, The M. Co., Ltd., Montreal	950
Metcalf, John S., Co., Chicago, Ill.	948
MidlandTowing&WreckingCo.,Ltd.,Midland,Ont	950
Modoc Soap Co., Philadelphia, Pa.	950
Montreal Steel Works, Ltd., Montreal	906
Mussens Limited, Montreal	Cover 1 and 878
National Malleable Castings Co., Cleveland, O.	Cover 1
New Hotel Brevoort, Chicago. Ill.	914
Norton, A. O., Coaticook, Que.	900
O'Connor, J. J., Port Arthur, Ont.	950
Ontario Wind Engine and Pump Co., Toronto.	940
Orford Copper Co., New York	924
Owen Sound Wire Fence Co., Ltd., Owen Sound.	946
Page Wire Fence Co., Ltd., Walkerville, Ont.	904
Pere Marquette Rd.	948
Peter Smith Heater Co., Detroit, Mich.	920
Phillips, Eugene F., Electrical Works, Ltd.	938
Piper, The Hiram L., Co., Ltd., Montreal	947
Piper, N. L., Railway Supply Co., Ltd., Toronto.	930
Polson Iron Works, Ltd., Toronto	890
Porter, H. K., Co., Pittsburgh, Pa.	888
Positive Lock Washer Co., Newark, N.J.	938
Prowse, G. R., Montreal	—
Pyke, J. W., & Co., Montreal	908
Pyle National Electric Headlight Co., Chicago.	900
Rail Joint Co., of Canada, Ltd.	Cover 1 and 902
Rhodes, Curry & Co., Ltd., Amherst, N.S.	896
Robb Engineering Co., Ltd., Amherst, N.S.	894
St. Thomas Brass Co., Ltd., St. Thomas, Ont.	922
Safety Car Heating & Lighting Co., New York.	884
Simplex Railway Appliance Co., Ltd.	Cover 4
Smart, James. Mfg. Co., Ltd., Brockville, Ont.	—
Standard Car Truck Co., Chicago, Ill.	914
Standard Coupler Co., New York City.	940
Standard Explosives, Limited, Montreal	912
Standard Inspection Bureau, Ltd., Toronto.	946
Standard Steel Works, Philadelphia, Pa.	904
Steel Concrete Co., Ltd., Montreal	904
Stevens, F. B., Detroit, Mich.	918
Submarine Signal Co., Boston, Mass.	926
Taylor, Homer, Montreal	938
Toronto Bolt and Forging Co., Ltd, Toronto.	928
Toronto Pressed Steel Co., Ltd., Toronto	926
United Typewriter Co., Ltd., Toronto.	928
Valentine & Sons Publishing Co., Montreal	902
Vulcan Iron Works Co., Toledo, Ohio.	948
Vulcan Iron Works, Wilkes-Barre, Pa.	948
Washburn Steel Castings & Coupler Co., The.	950
Wire & Cable Co., Montreal	912
Wolfe Brush Co, Pittsburg, Pa.	936
Wood, G. S., Chicago, Ill.	9 7
Woodman, R, Mfg. and Supply Co., Boston, Mass.	938

The Public Service Commission of New York State summoned every railway operating in the state to appear at Albany, Nov. 25, and show cause why they should not be directed to issue interchangeable mileage books of 1,000 and 500 miles at a uniform rate of 2 cents a mile, and without many of the restrictions now placed upon the sale of mileage books by some of the larger companies.

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G.T.R. Shops at Stratford, Ont.

Among the various railways which are reconstructing and enlarging their locomotive repair shops according to modern designs is the G.T.R., which is spending large sums on its various repair shops over the entire system. Those of particular interest on this road are the new shops under construction at Stratford, Ont., and Battle Creek, Mich. The latter were described and illustrated in our April issue. This work, as well as the various other similar jobs now under construction, are in accordance with the natural tendency of railways to adopt modern methods in their repair shops to turn out the maximum amount of work.

One of the accompanying illustrations shows the general layout of the new shops at Stratford. The large machine and erecting shop, 616 by 175 ft., and boiler shop, 154 by 135 ft., indicated in the foreground, are under construction, and are being rushed as fast as possible with the hopes of having 15 bents under cover and in operation this winter. The above-mentioned shops occupy nearly three acres of ground space. The building to the left and adjoining the boiler shop is now standing, and is used for the repair of locomotive tenders. The other proposed buildings indicated in the background of the illustration are, from left to right, store house 60 x 200 ft.; blacksmith shop, 100 x 300 ft.; power house, 90 x 90 ft.; and foundry 110 x 140 ft. The construction of these buildings will follow in the order of their importance and needs, after the machine and erecting shop is well under way, and the weather permits. The old machine shop, which is being torn down in sections as fast as the new shop is erected, occupied a portion of the space covered by the new building.

As the ground selected for the plant was irregular and low in places, it was necessary to fill and level off the surface before starting construction. Concrete piles were used in the foundations of the new boiler shop and a portion of the new machine and erecting shop. It was necessary to drive these piles from 15 to 18 ft. below the average elevation of the ground to provide sufficient bearing power for building foundations. The concrete piling thus far has given satisfactory results, and no trouble is anticipated with it. The foundation concrete work is under charge of G. Mitchell, Master of Bridges and Buildings.

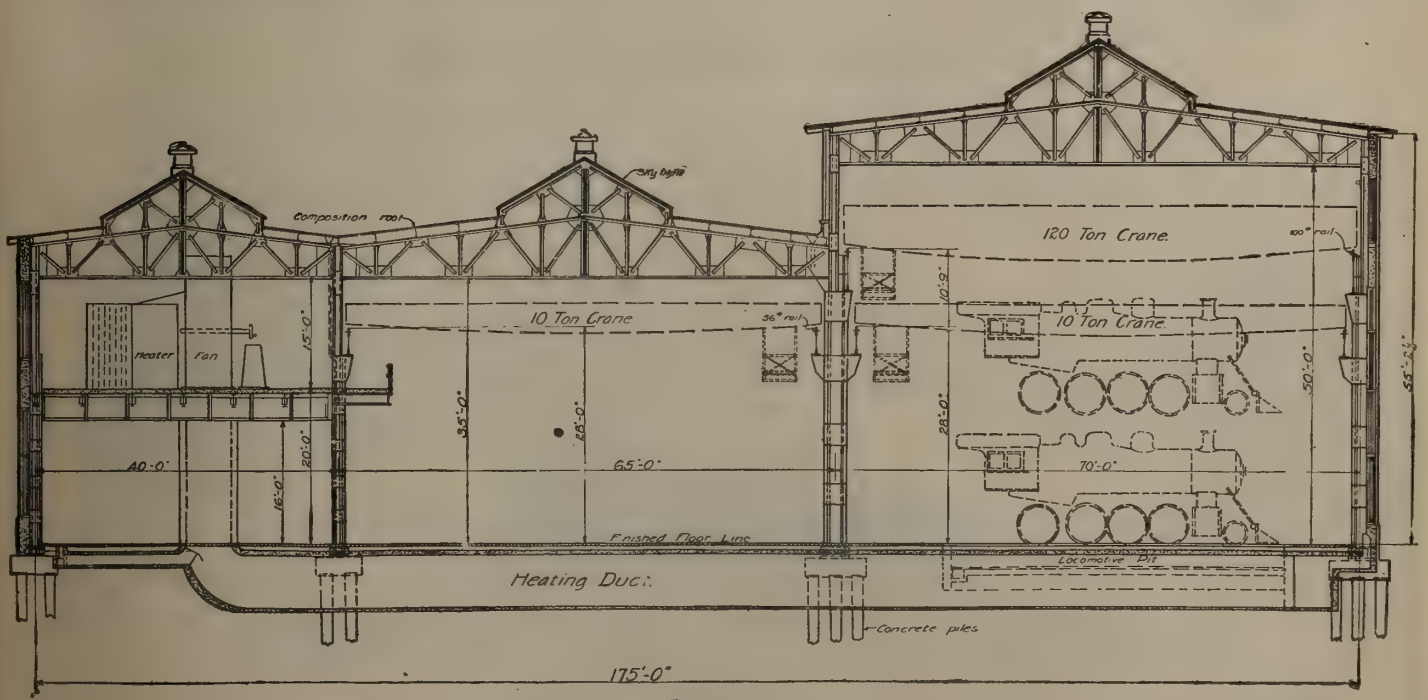
The building walls are of reinforced concrete with the outside surface finished as to give a neat appearance. While this building does not possess any striking architectural designs, it is marked by its massiveness, clear-cut line, and simplicity of construction. The structural steel is being manufactured and erected by the Canadian Bridge Co., Walkerville, Ont. The general building contract has been awarded to B. V. Hole, of London, Ont., whose work begins shortly after the erection of the structural steel.

R. Patterson, Master Mechanic at Stratford, is completing the machine tool layout for the machine and erecting shop which is arranged to handle the work on the various parts of a locomotive in the most economical manner, and is the result of considerable investigation and study on his part. Most of the large machine tools are to be driven individually by electric motors, as this practice has proven by experience to be the most desirable. This innovation of individual electric drive has revolutionized the machine tool layouts in shops where belt or group drive were used, ever since the desirable features of separate drive were realized by engineers. One of the facts in favor of this drive is that the tools may be placed in any convenient space about the shop regardless of the source of power, as the latter fact, with belt drive, determined the location of machines within a short distance of shafting. The common method of belt drive will be used for the smaller machine tools that require less power to drive. Considerable use is to be made of compressed air as a source of power for the various tools and appliances throughout the plant. Some of its uses are the driving of riveting machines, chisels, turntable motor, forge fires, blowing out engines, painting, etc. This system of operating tools has proven by experience to be flexible and most satisfactory for the purpose it is to serve.

The new shop will be capable of repairing 28 locomotives standing over pits at the same time, and the layout has been arranged so that should this be insufficient space in future the capacity of the shop can be increased at any time.

A cross section through the center of the machine and erecting shop which is shown in the other accompanying illustration indicates the 120-ton electric travelling crane, which spans the engine pit bay, lifting up one of the largest locomotives operated on the line, and conveying it to a repair pit. Any one seeing this practice of conveying a locomotive overhead with men working underneath for the first time is inclined to have a queer sensation of fear, dreading what the results would be should the locomotive fall, but this method of handling locomotives has proven entirely satisfactory wherever used, and it is marked with many advantages over the old style method of extending a track from a turntable or ladder on to the various pits. Jacking up engines to place drivers, etc., is also eliminated by this practice. Some of the equipment done away with by the use of the large crane to place locomotives at the various pits, is the transfer table with its necessary pit, that ordinarily covers valuable space and otherwise could be used for shop purposes. A ten-ton electric travelling crane is indicated in illustration, installed in the same bay, directly below the large 120-ton crane that handles the lighter repair parts. This crane is particularly designed to rapidly handle miscellaneous parts, thus relieving the large crane that is slow to act, due to its mass.

The heating ducts indicated under the floor line in the illustration, provide passage for the distribution of hot air received from heater located on balcony floor throughout the entire shop. This system of heating shop buildings has proved successful, as the exhaust steam from the power house, as well as the fan engine, is utilized for heating coils in heater. Separate lockers will be provided at convenient places throughout the shops for men to keep their belongings. In some cases these lockers will be portable, so that men working on odd jobs around the shop can move them near their work. Drinking



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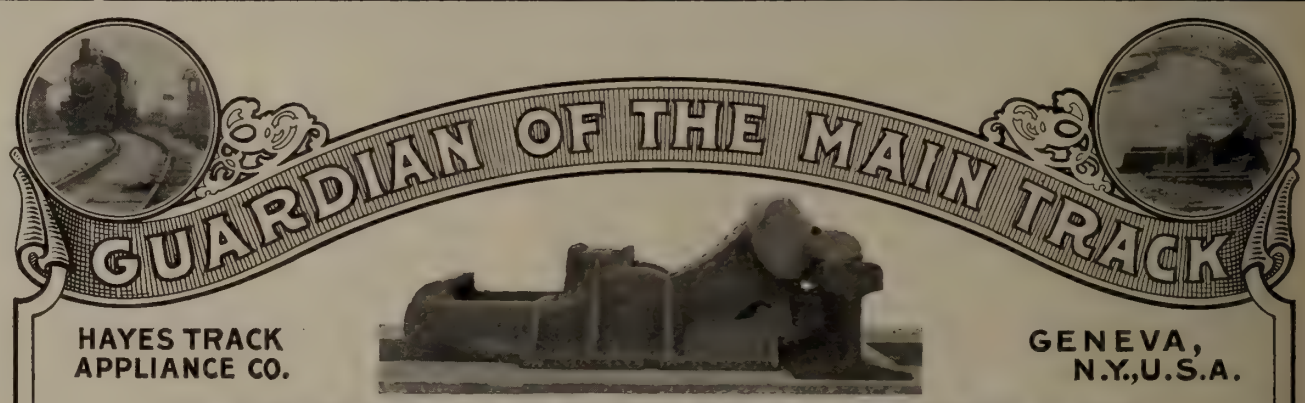

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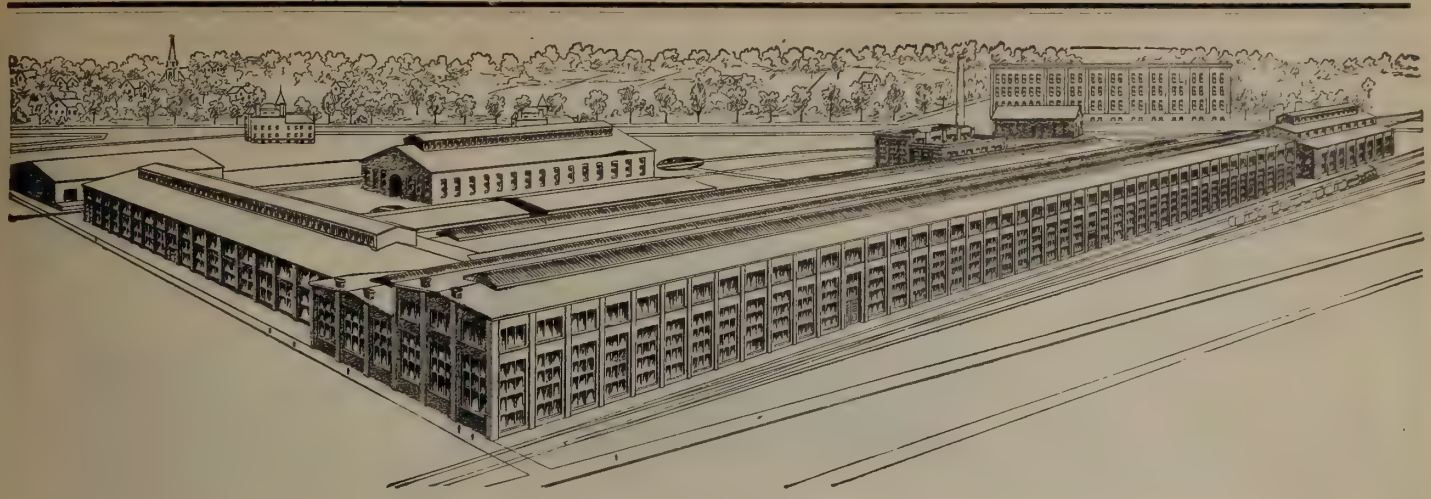

GRAND TRUNK RAILWAY SHOPS AT STRATFORD, ONT.

fountains with a continual stream of artesian water are to be installed at convenient places throughout the shop. Lavatories will also be arranged in various portions of the shop. At night the shops will be brilliantly lighted by one of the improved systems of vapor lamps which have recently been perfected.

The designs, etc., for the work were prepared subject to the approval of E. H. Fitzhugh, Third Vice-President, and W. D. Robb, Superintendent of Motive Power. Considerable credit is due R. Patterson, Master Mechanic at Stratford, for the general facilitation of the construction work as well as the admirable way in which the repair work on locomotive boilers during construction of the new shop has been handled in spite of being cramped for room.

Stark Telephone, Light and Power Co., Limited.

An application was made, Nov. 19, for a winding-up order against this company, on behalf of a creditor, for $700. The petition sets forth that the company is indebted to the extent of $127,500 outside its bond issue, and that a judgment had been filed against it three weeks previously for $1,400, on which only $100 had been paid; also that it had made an assignment on Nov. 16. A statement which has been issued says that the failure had come as the result of financial stringency, but that immediate steps would be taken to reorganize. At present the plant is being operated by the assignee, and it is intended that the bondholders and others shall contribute to a fund to keep it in operation in the meantime. The company was incorporated in 1903, with a capital of $1,000,000, at $10 a share. There are 25,000 preferred shares, of which 21,700 have been issued. Of 75,000 shares of common stock, 35,000 have been allotted and fully paid up. The company supplies light to Toronto Junction, North Toronto, Etobicoke and York townships. It also owns a plant in St. Catharines, and has a franchise in Welland. At Weston a by-law has been passed to lease the municipal plant there to the company. The bond issue amounts to $400,000, of which $94,000 worth have been sold, and it is said there are loans against the remainder. Litigation is pending between the company and one of the subsidiary companies of the Ontario Power Co., at St. Catharines, Ont. The company operates a telephone exchange at Toronto Junction. The directors are: Hon. J. Dryden, President; R. Y. Ellis, Vice-President; A. M. Stark, W. Dineen, and W. B. Rogers, Toronto.

D. B. Hanna, Third Vice-President Canadian Northern Ry., addressed the Empire Club, Toronto, Nov. 28, on "some transportation problems in the west."

The New Western Freight Rates.

The Winnipeg Board of Trade appears considerably exercised over the new freight tariff, which has been filed with the Railway Commission, to become effective Nov. 25, in accordance with the Commission's order in what is known as the "Portage La Prairie Complaint." The Portage La Prairie, Man., Board of Trade, on Aug. 13, filed a complaint with the Railway Commission to the effect that the tariffs then in effect from Winnipeg were illegal, inasmuch as they discriminated in favor of and against individuals, localities and commodities, and they called upon the Commission to declare these tariffs illegal. In his decision, Chief Commissioner Killam, after citing the complaint, concluded his judgment with the following words: "In my opinion the objections to the tariffs are well founded; they appear to me to be contrary to the provisions of the Railway Act prohibiting undue or unreasonable preference in favor of particular persons and unjust discriminations between different localities, and the charging of higher tolls for a shorter than for a longer distance where the shorter distance is included in the longer, and which require that all tolls shall always, under substantially similar circumstances and conditions in respect of traffic of the same description, etc., be charged equally to all persons. In my opinion the parties interested should be notified that the Board considers that these tariffs are contrary to the provisions of the Railway Act, and that they will be disallowed, and that the railway company should, not later than Nov. 15 next, file and put in force other tariffs in lieu of those complained of. I think it advisable that the Board should not, in this instance, determine the rates to be substituted, as much delay would be involved in making the necessary enquiries; but that it will be sufficient to disallow these tariffs, allowing the company to substitute new ones, which may be made the subject of complaint if found to be unjust to any interests."

Under this order the railways had until Nov. 15 to file and put in force other tariffs in lieu of those complained of, but under the Act 10 days filing in advance of the date effective is required in the case of increases in any rates. The new tariffs were filed Nov. 15, and, therefore, became effective on Nov. 25. When the C.P. freight officials appeared before the Board in the Portage La Prairie case, and heard the argument, they realized, as did Winnipeg Board of Trade members, who were also present, that there was only one decision that the Commission could give, which was that the tariffs complained of were discriminatory. There was no uniform scale of rates in these old traders' tariffs from Winnipeg; the rate for 50 miles in one direction was higher or lower than for 50 miles in another direction. In some instances the rates from Eastern Canada to Winnipeg added to these traders' rates to points west were lower than the through rates from the east to such western points. In some cases the rates from Winnipeg to a point west were lower than to a point intermediate. The tariffs were full of inconsistencies and discrimination, as a result of years of rapidly changing conditions and complications which will invariably creep in when a new country is being opened up by new lines of railways shortening the distances between points. There were also carried in these tariffs certain commodity rates lower than the rates applicable on goods of the same class, and which ordinarily took the same rates. Prominent among such commodities were what is known as the "Crow's Nest Commodities," with which western people are familiar.

Just about the date of the Portage La Prairie complaint, the Commission's judgment was handed down in what is known as the "Vancouver Complaint," in which some time ago the Vancouver Board of Trade complained that the rates from Vancouver eastbound to Alberta points were relatively higher than the rates from Winnipeg westbound; for instance, the class rates from Vancouver to Calgary, 643 miles, were higher than the rates from Winnipeg to Calgary, 840 miles. Furthermore, they complained that from Winnipeg the C.P.R. carried some commodity rates on iron and hardware articles into the Kootenay, which were very much lower than the rates on some commodities from Vancouver to the Kootenay. The distance from Winnipeg to Nelson is approximately 1,100 miles, from Vancouver to Nelson 556 miles. All of these rates, it was claimed, constituted an unjust and unlawful discrimination against Vancouver.

We have already published the Commission's judgment on the Vancouver case. Briefly it was to the effect that under all the circumstances they could not find that the class rates from Vancouver eastbound were excessive compared with the Winnipeg class rates westbound, but that the commodity rates on iron and other hardware articles carried from Winnipeg to Nelson were discriminatory, as compared with the rates applicable on such commodities from Vancouver to Nelson, and they ordered that this discrimination be removed, and the rates made more relative. The C.P. was, therefore, confronted with the condition, that if they continued to carry these low carload commodity rates from Winnipeg to Nelson, they would have to put in such rates from Vancouver to the

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Kootenay as would undoubtedly divert the trade in a large number of these articles to the Vancouver gateway; that is, it would enable manufacturers in England to reach the Kootenay market in many of these lines, because of the low rates they can obtain by the China Mutual, or the Blue Funnel Lines to Vancouver, and it would seriously affect, not only the railway's own interests, but also Eastern Canada's iron and hardware trade.

The C.P.R. officials, therefore, had to consider two of the Board's judgments when they proceeded to frame up their new tariff from Winnipeg, and furthermore, in order to conform with the Board's order, they had to re-issue all tariffs which carried the same discriminatory conditions as those in what are known as "Winnipeg Traders' Rates." They, therefore, had to re-issue their tariffs out of all points, which are recognized as distributing centers, such as Brandon, Regina, Moose Jaw, Calgary, etc. This work of harmonizing these numerous tariffs, and eliminating what was complained of, and conforming with the two different judgments of the Board, involved an immense amount of labor, and the C.P.R. officials now say they have filed with the Commission a set of tariffs from all points affected, which are on a uniform scale, based upon mileage; they claim that the new rates from Winnipeg to all points in any direction are on exactly the same scale, according to the distance; that on every commodity, such, for instance, as 5th class, the rate is the same, and that no different rate is charged no matter who the shipper or consignee is. The effect of this, however, seems to be that in bringing about this uniformity they have made some increases in their rates, particularly to points in Southwestern Manitoba, and in fact, to all points within a radius of 150 miles from Winnipeg. These increases vary from 1 and 2c. up to 15c., with one exception, where there is an increase of 20c. 1st class, but when the tariff extends beyond this area the rates begin to decrease, until to Nelson the class rates are 1st ciass 20c., and 5th class 10c. lower than before, and to Calgary 1st class 5c., 5th class 4c. lower. To these latter points, however, the old commodity rates referred to are cut out, so that on these particular articles, viz., iron, hardware, paints, etc., to the Kootenay it means an advance, and at Calgary it breaks even; therefore, while the iron interests are not benefited at the distant points, the grocery, dry goods, drugs and other lines of trade are benefited.

While the Winnipeg Board of Trade have not made any specific complaints against the new tariff, they ask that more time be given for consideration thereof before they are published. From the reports received from other centers in the west, such points seem satisfied with the new tariffs; apparently they realize that the only proper adjustment of these questions is under a mileage scale, so that places which are situated geographically so as to be in the center of a large consuming territory, can get the benefit of such geographical position. To the ordinary observer it would seem improbable that the change such as appears to have been made in the rates could seriously affect Winnipeg's jobbing interests, with it's geographical position, and the firm hold they have secured upon the jobbing trade of Manitoba and Saskatchewan. It would seem that some of the consumers in central Manitoba would pay higher freight rates on their goods shipped from Winnipeg, but as against this the C.P.R. says, outside of the question of uniformity in the rates, etc., that they are reducing their all-rail rates from Eastern Canada 30c. per 100 lbs. 1st class, and 10c. per 100 lbs. 5th class, and that such reductions are more than equivalent to any advances made in the rates from Winnipeg to Manitoba points.

From press despatches it would appear that the Manitoba Government have simultaneously with these changes in the Winnipeg rates, which changes are made on the same basis by the Canadian Northern Ry. out of Winnipeg, ordered the latter company to reduce their rates on oats, barley, rye and speltz 1 to 2c. per 100 lbs. It is stated that under the terms of the Provincial Act, which authorized the transfer of the old Northern Pacific and Manitoba Ry. lines in Manitoba to the Canadian Northern, the Government could call upon them for certain reductions in the rates on grain then in effect, and the above order calling for a reduction in the rates on coarse grains, which is effective Nov. 25, is issued under the act referred to. It is claimed, therefore, by the Manitoba Government that this reduction in the rates of oats, barley, etc., will more than compensate the Manitoba farmer for any advances there may be in the Winnipeg distributing rates, combined with the reductions in Western and Northwestern Manitoba.

It will certainly be a relief to the railways in the Northwest if the revision of these rates will put a stop to the numerous complaints that have been made constantly by ambitious centers opening up in the great west, which have in the past held the opinion that Winnipeg has been favored by the C.P.R. in the matter of freight rates.

THE CHIEF COMMISSIONERS' OPINION

Following is the full text of the opinion of A. C. Killam, Chief Railway Commissioner, in re the Portage la Prairie Board of Trades complaint: "This is a complaint of the Board of Trade of the town of Portage la Prairie, Man., against a series of special freight tariffs of the C.P.R. Co., expressed as, 'To be used on re-shipments by Winnipeg wholesale houses only to traders doing business at or tributary to stations specified herein.' The grounds of objection to the tariffs are, 'That these tariffs are illegal inasmuch as they are discriminatory as between different shippers and different consignees, and also as between different communities.'

"Evidence was taken in the matter before me alone at Winnipeg, under special order of the Board. Notice of the taking of this evidence was given to the Winnipeg Board of Trade, that those representing the commercial interests of Winnipeg affected by or interested in the tariffs, might have an opportunity of taking part in the proceedings, and of taking any action which they might desire in support of the tariffs objected to; and the President, the Secretary and two other members of the Winnipeg Board of Trade attended.

"The evidence given before me showed that no persons, outside of those whose names appeared upon a certain list of wholesale merchants doing business in Winnipeg, could ship goods under the rates mentioned in those tariffs, and that the company had no tariff giving similar rates to other persons or classes, and that the rates, also, were limited to shipments to consignees whose names appeared in certain lists of traders furnished to the railway company's agents at the different points, respectively. The evidence further showed that shipments made by or to others than the parties named in these respective lists were governed generally by the rates in the ordinary mileage tariffs of the company, which were considerably higher than the rates in the tariffs objected to. The evidence further showed that there was no tariff of a similar description for shipments by similar classes of persons from Portage la Prairie, but that such shipments were governed by the ordinary mileage tariffs under which the rates were higher for proportionate distances. It further showed that, in some instances, the rates from Winnipeg, under the tariffs objected to, were lower than those charged from Portage la Prairie to points westward therefrom, although the goods were carried over the same routes from Portage la Prairie in addition to the distance from Winnipeg to Portage la Prairie. The evidence also showed that in many cases the rates from Winnipeg to Portage la Prairie, under these tariffs, were much less for the same classes of goods than those from Portage la Prairie to Winnipeg.

"Opportunity was given, both to the railway company and to the Winnipeg Board of Trade, to discuss the subject and to offer any remarks or arguments which they might desire to make in regard to the complaint. While counsel for the railway company did, to some extent, contend that the tariffs were justified by the conditions existing when they were originally framed, no real argument in support of them was made. The gentlemen of the Board of Trade were informed that if, after further consideration and taking legal advice, they desired to offer anything in support of the tariffs, it would be considered by the Board. They did state, that, as these tariffs had been established for a considerable length of time and business had been transacted under them, it would be unfair and would cause too much disturbance in business to have them suddenly abrogated. All this occurred some two months ago, and no communication has since been received from the Winnipeg Board of Trade.

"While refusing at the time to express an opinion upon the subject, I warned the parties that it would be advisable that they should prepare for a change. Ample opportunity has now been given for the purpose, and I have been informed by the Assistant Freight Traffic Manager of the railway company that the company is prepared to substitute by Nov. 15, 1907, new tariffs which would not be open to the objections put forward on this complaint.

"In my opinion, the objections to the tariffs are well founded; they appear to me to be contrary to the provisions of the Railway Act prohibiting undue or unreasonable preferences in favor of particular persons and unjust discriminations between different localities and the charging of higher tolls for shorter than for a longer distance where the shorter distance is included in the longer, and which require that all tolls shall always, under substantially similar circumstances and conditions in respect of traffic of the same description, etc., be charged equally to all persons.

"In my opinion, the parties interested should be notified that the Board considers that these tariffs are contrary to the provisions of the Railway Act and that they will be disallowed, and that the railway company should, not later than Nov. 15, 1907, file and put in force other tariffs in lieu of those complained of. I think it advisable that the Board should not, in this instance, determine the rates to be substituted, as much delay would be involved in making the necessary inquiries; but that it will be sufficient to disallow these tariffs, allowing the company to substitute new ones, which may be made the subject of complaint if found to be unjust to any interests."

The special meeting called for Oct. 28, to ratify the proposals for the reconstruction of the Pere Marquette Rd. Co., was adjourned indefinitely, it having been found impracticable to arrange the preliminaries of the reconstruction.

Press dispatches from St. John, N.B., Nov. 14, stated that it was expected that an official announcement would shortly be made to the effect that the C.P.R. had taken over the New Brunswick Southern Ry. from the late Russell Sage's estate.

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The Work of the Freight Traffic Department.

By John Pullen, Assistant Freight Traffic Manager G.T.R.

To the members of the Canadian Railway Club, whose lives are devoted to the study of scientific, engineering, and mechanical problems, I am sure that anything I can say in reference to the railway freight traffic work, even though described in charming literary style, will seem dull and commonplace. If in what follows there should seem to be what you would term "shop talk" or departmental phraseology, I must ask your indulgence. We live in an environment which calls for the use of technical terms, apt, but expressive, at least to ourselves, if not always clear to others.

To operate a railway successfully, it is essential that it be organized into special and separate departments, each having certain well-defined objects, namely, to centralize responsibility and give direction to trained experts, who in time become specialists in their particular work. For this purpose there is established the engineering department, motive power department, transportation department, passenger department, accounting department, freight department, etc. I have been asked to tell you something about the workings of what to me is the best and most important department of all—the freight department.

This department is responsible for the gross earnings derived from the transportation of freight and live-stock traffic. It is the duty of its officers to obtain all the freight they can for the railway. This can only be done by a constant and systematic solicitation on the part of its representatives, by carefully looking after the transportation requirements of its customers, by properly arranging its freight rate schedules so as to permit the utmost freedom of interchange of commercial commodities between various sections of the country, and by framing its rules and regulations for the carrying out of the thousand and one details which must necessarily be followed in order that the public may be properly served and the interests of the railway protected.

In somewhat the same manner that the organization of the railway is subdivided into departments, so each department is again subdivided, in order that the work may be systematized and centralized for close supervision. The head of the freight traffic department must necessarily be at the company's headquarters, in close relation to the executive officers, who decide matters of policy and questions of supreme importance. His title is usually that of vice-president or freight traffic manager. He assumes direct charge of matters of greater importance, the selection and appointment of subordinate officers, all negotiations leading up to and culminating in formal contracts with connecting railways and steamship lines relating to traffic, and through the medium of daily or weekly reports from many sources keeps a close supervision of every part of the department's work, in order that he may direct its affairs and report results to the executive officers. He must have close at hand an efficient staff of assistants, who can be relied upon to carry out his directions to the minutest details. These assistants are usually designated as assistant freight traffic manager, general freight agent and assistant general freight agent, each reporting to the next ranking officer. Their jurisdiction is co-extensive and embraces all portions of the railway.

It is manifestly impossible to handle from headquarters all the details of the freight traffic of a railway having a large mileage. Therefore the system is divided into districts or divisions, the boundaries of which are usually determined by the sources and amount of traffic requiring supervision. A division freight agent, or officer of corresponding title, reporting to the general freight agent, is placed in charge. He supervises and instructs the station freight agents in their duties for the freight department and keeps on friendly terms with, so as to best serve, the patrons of the railway. The division freight officer, in carrying out the purposes of the department, is required to study his section of the country and its agricultural and commercial conditions, that he may assist in the development of the company's traffic. He will see that the freight rates which are prescribed for use in his jurisdiction are properly adjusted to each other and in their relation to other sections, that the merchants and manufacturers may be assisted in carrying on a successful business. He should maintain a personal acquaintance with practically all of the shippers. He is expected to interest investors in the location and establishment of manufacturing enterprises along the line, to co-operate with producers in finding markets for their products, and to work with the civic authorities in all towns and cities in promoting local enterprises. If he can establish a saw mill in a lumbering country, he creates traffic and assists in clearing the forest preparatory to the agricultural pursuits which follow. If he can interest a grain buyer to erect a small elevator at or near a railway station, to which the farmers can bring their grain for sale, it is an advantage to the community and to the railway. If he can persuade the farmers in a given community that it is to their interest to sell in a distant market their high grade grains, such as wheat, peas, and barley, instead of feeding them to their live-stock, and in place thereof to buy a cheaper grain brought in by the railway, he aids the community and creates traffic for the railway. In the newer sections of the Northwest the division officer assists the Government officials in their tours, where lectures are given to the farmers regarding the proper selection of seeds best adapted for their particular localities.

The largest part of the traffic of the railway originates on its own line. For our present purposes this may be designated as "local." While it requires and receives the closest attention of its carefully selected staff of subordinate officers, there is also a large traffic designated as "through," which originates beyond its own lines, brought to its various junction points by connecting railways and steamship companies, with which friendly traffic relations must always be maintained by the officers. This traffic is always of a keenly competitive character, and in order to secure its full share, each railway provides an organization of outside district officers, who in turn supervise the work of the commercial or general agencies maintained in many of the large cities. It is the duty of these agents to keep themselves fully informed regarding traffic that is to move in the future and through the good-will of the customer, which they must at all times cultivate, secure the traffic for the railway which they represent. As there is always the keenest strife between competing railways for this through traffic, it is important that the commercial agent, to be successful, must be a man who stands high in the community for integrity and faithful performance of duty to the public as well as to his company.

His success is measured by the amount of traffic that he secures, and the extent to which he enjoys the confidence of the public. Such agencies are maintained in most of the large manufacturing and commercial centers from the Atlantic to the Pacific, as well as in Great Britain and on the continents of Europe, Asia and Australia.

Amongst other instrumentalities used in securing the through traffic, are organizations known as fast freight lines or despatch lines. Several connecting railways extending between east and west, whose interests are mutual, co-operate in maintaining offices and joint agencies, whose duty it is to secure traffic for their particular fast freight line. These "lines" are not incorporated. They are merely organized co-operation. The expense of maintaining these joint establishments is paid pro rata by the railways in interest according to the benefits received. There are many such organizations, and as each has a distinct name and trademark, which becomes well known to the public as indicating a through route, they are successful in building up traffic for the railways which comprise the through route.

The traffic to and from abroad is placed under another specially trained officer, the foreign freight agent. The foreign freight (that imported as well as that exported) is competed for by all the railways and steamship lines serving the seaports on the Atlantic coast and the Gulf of Mexico, from Montreal and Halifax on the north to New Orleans on the south. The Oriental traffic is largely handled through ports on the Pacific ocean. The problems arising from the keen competition for this foreign traffic are complex and require a keenly discerning and discriminating judgment. A great deal of this work is directed by telegrams and cables. The foreign freight agent must not only keep himself informed regarding the probable movement of traffic, but must watch all his competitors with unceasing vigilance, and maintain the closest and confidential relations with steamship companies and owners, in order to secure from them at all times the lowest ocean rates and the treatment accorded to the "most favored nation."

From the transportation of the hundreds of thousands of consignments of countless varieties of traffic of domestic and foreign origin, which are distributed over the American continent as well as abroad, and which pass through so many different hands, there inevitably arise some errors which result in claims from the public for loss of or damage to goods, or for excess charges. For the purpose of promptly investigating and equitably adjusting such claims, another department, under a freight claim agent, is established. A large staff of experienced investigators of freight claims is here employed. The head of that department must have a thorough knowledge of the rules and regulations, not only of the freight department, but of the transportation department as well. He must have a keen appreciation of, and sympathy for, the apparently unavoidable annoyance which such claims necessarily give the public, and by the manner in which his work is carried on he can win many friends or may create many enemies for the railway. He must have a knowledge of commercial practices and trade conditions, and be familiar with the laws, federal, state, and provincial. He must be able quickly to discern whether a claim has merit or not, and above all, be courteous and fair and just in his dealings with the public.

In recent years there has arisen on this continent a public demand for regulation of railways by federal or state commissions, to which appeal may be made wherever a merchant has reason to feel that his freight rates are excessive, or are unjustly discriminatory. So long as men are constituted with different temperaments, and endowed with firm convictions as to what is right and wrong, it is too much to expect that freight officers—even of the highest skill and the best intention to be fair and reasonable—will always succeed in avoiding differences of opinion with their patrons. Although we believe and broadly declare that the interests of the public and of the railways are mutual and

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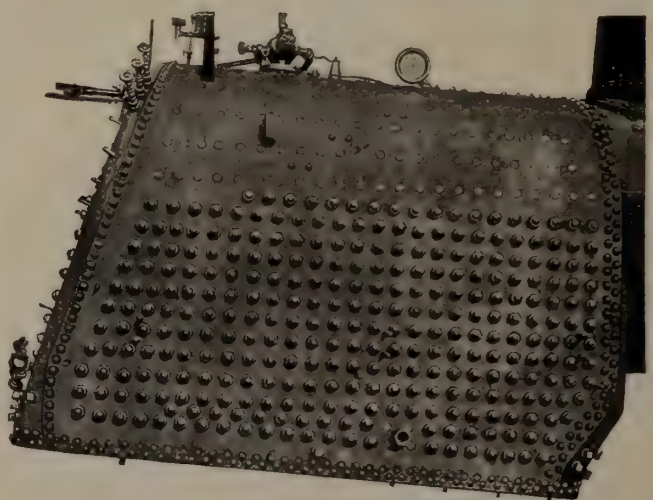

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interdependent, there are certain to arise from time to time disputes which have their origin in the desire of shippers to obtain some further advantage by lower freight rates, which the railways either are unwilling to concede, because its necessity or fairness has not been established, or because such a concession, if made, might have the far-reaching effect of disturbing a considerable part of what is termed the rate fabric, and thus result in serious loss of revenue to the company, which it is the duty of the department to conserve.

Each of these appeals to the railway commissions can be likened to a suit at law, and is dealt with in much the same way. By reason of their far-reaching importance it is often found necessary to call into use the services of the company's best legal talent. These suits are expensive to the company, and require much of the time and attention of the departmental officers, hence, they are to be avoided, whenever possible, by patient explanation, persuasion, or reasoning with the complainant. Most of the complaints are based on what is alleged to be unjust discrimination in rates. It is, therefore, of paramount importance that the freight-rate schedules of the company be compiled with skill and care, with the object of not only fixing rates which, applied to the probable traffic, will in the aggregate yield reasonable returns, but which are at the same time free from unjust discriminations. This is one of the most important functions of the freight traffic department. Skilled mathematicians, trained in the department and experienced in the making of tariffs, are employed.

Some idea may be had of the complex nature of this branch of the work when I say, without attempting at length to explain the object of each, that there are:

Local tariffs and joint tariffs;
Through tariffs and proportional tariffs;
Export tariffs and import tariffs;
Standard tariffs and differential tariffs;
All rail tariffs and ex-lake tariffs;
Ocean and rail tariffs, and lake and rail tariffs;
Winter tariffs and summer tariffs;
Eastbound tariffs and westbound tariffs;
Class-rate tariffs and commodity tariffs;
Association tariffs and individual tariffs;
and others too numerous to mention.

There is no branch of the traffic work, of which so little is known to the outside world as that of making freight-rate schedules. The public demands, and is entitled to receive, fair and reasonable freight rates, so adjusted as to avoid unjust discriminations. With the keen competition between rival manufacturers and merchants, the prime requisite is that there should be stability of rates, fairly related, and given to all without partiality. A freight officer is sometimes asked —"How do you make these freight rates? What is the basis upon which you start? How do you determine what is a fair and reasonable rate? With the thousands and thousands of rates which you make, how do you determine what each shall be and the relation between them?"

The balance of Mr. Pullen's paper, which was read at a meeting of the Canadian Ry. Club recently, will appear in our next issue.

The following officers were elected at the recent annual meeting of the Fort Seneca (B.C.) Mutual Telephone Co.: President, L. C. Umsted, Vice-President, W. C. Rosenberger; Secretary, I. S. Edwards; Treasurer, F. Edwards.

An investigation is being made by the Manitoba Attorney-General's Department, into a series of accidents arising out of dynamite explosions on the Eastern Division National Transcontinental Ry. construction work north of Kenora, Ont.

TOO LATE FOR CLASSIFICATION.

Railway Development, Etc.

Central Ontario Ry.—Tenders are being received to Dec. 2, for clearing, grading, tracklaying, ballasting and other work required in the construction of the extension from near Bancroft to Whitney, Ont., a distance of about 18 miles. The extension is in progress between Bancroft and Lake St. Peter, 25 miles, W. Gibson, Port Hope, Ont., being the contractor. Grading upon this portion of the extension is reported to have been completed for 14½ miles and track to have been laid upon four miles.

Edmonton, Dunvegan and British Columbia Ry.—Application will be made at this session of the Dominion Parliament for an act granting an extension of time for the commencement and completion of the projected railway. Pringle and Guthrie, Ottawa, are solicitors for the company.

Ottawa, Brockville and St. Lawrence Ry.—Application will be made at this session of the Dominion Parliament for an Act extending the time for the commencement and completion of the line authorized to be constructed between Ottawa and Brockville, Ont. N. Belenger, Ottawa, is secretary of the company.

Pontiac Central Ry.—An application will be made this session of the Dominion Parliament for an Act declaring the Pontiac Central Ry., authorized to be constructed last session of the Quebec Legislature, to be a work for the general advantage of Canada. Powers will also be asked to extend the lines authorized by the Quebec Act to James Bay, along the valley of the Nottaway River, and also to extend in a southerly direction to the Brockville, Westport and Northwestern Ry.

Stanstead, Shefford and Chambly Ry.—The Central Vermont Ry., which operates this railway under lease, is engaged in bringing the roadbed up to a higher standard, and ballasting and other work is in progress. At a meeting of shareholders, Nov. 13, a petition was presented asking for an extension of the line from Waterloo, Que., to Island Pond, Vt., via Eastman, Magog, Fitch Bay, Beebe Plain, Derby and Charleston, about 50 miles. Such a line would shorten the distance between Montreal and Island Pond by 26 miles and give the G.T.R. a second route between the two points. G. C. Jones, General Manager Central Vermont Ry., has promised to give the matter every consideration.

Grain Elevator Notes.

W. C. Thornburn is building an elevator at Broadview, Sask., and another at Oakchella, Sask.

It was stated, Nov. 15, that over 170,000 bushels of grain had arrived at the C.P.R. elevator at St. John, N.B.

The C.P.R. is installing eight 75 h.p. motor attachments, in connection with the motors operating the receiving and shipping legs of its elevator B, at Fort William, Ont. It is estimated that a saving of about $1,500 a year will be achieved thereby.

H. Kippen, President, Farmers' Elevator Co., Ltd., Carlyle, Sask., was presented with a gold watch and chain, Nov. 9, in accordance with a vote passed at the annual shareholders' meeting, as a testimony of the work done by him in connection with the company during the past season.

Atlantic and Pacific Ocean Marine.

The Salvation Army is said to intend acquiring a steamship to enable it to deal with its own immigrants, the vessel to be entirely manned by Army members.

M. Balmer, a retired captain, who had commanded vessels sailing to the West Indies, and to South American and European ports, died at St. John, N.B., Nov. 12, aged 70.

Two stewards employed on the C.P.R. steamship Empress of Britain were arrested Nov. 13, and charged with defrauding the company by smuggling passengers on that vessel. They were taken to Liverpool, Eng., for trial.

The mail contract with the Orient Co. for the Australian mail service has been signed, covering ten years from 1910. A subsidy of £170,000 a year is provided, the company to run five 17-knot steamships, effecting a saving of two days, and to build two more vessels later.

The new Royal Edward Dock, at Avonmouth, Eng., was opened by Sir H. Campbell-Bannerman, Prime Minister, Nov. 14; and at the luncheon which followed, Hon. C. Sifton, responding to the toast of "Ships, Colonies and Commerce," referred to the proposed fast service between Great Britain and Canada.

The Cunard Line steamship Mauretania arrived at New York, Nov. 22, on her maiden trip. On account of heavy weather at sea, and fog in approaching the harbor, the anticipated lowering of the Lusitania's record did not take place. She had on board gold to the value of $12,500,000, which is believed to be the largest amount ever transported on one vessel.

Maritime Province and Newfoundland Marine.

Tenders are being received for the construction of an extension to the public wharf at Dorchester, N.B.

The steamboat Victoria struck a log in the St. John River near Fredericton, N.B., Nov. 11, and broke her paddle wheel.

Two schooners, of 167 and 100 tons, named, respectively, Mildred and Silver, were launched at Lunenburg recently.

J. Perry, who had been in charge of the Sheet Harbor lighthouse, N.S., for 28 years, died at Pope's Harbor, N.S., recently.

A press report states that Mackenzie, Mann & Co., Ltd., intend having a steamboat built to run between St. John, N.B., and Port Wade N.S.

It is reported that control of the Consolidated Steamship Co., of which the Eastern Steamship Lines is a part, has passed to J. Pierpont Morgan.

Tenders are under the consideration of the New Brunswick Public Works Department, for the construction of a low water wharf at the Jemseg mouth, Cambridge, N.B.

The Dominion Government steamship Lady Laurier struck on a shoal near Clark's Harbor, N.S., about Nov. 13, and broke a propeller blade. It is stated that the accident was due to the shoal being wrongly charted.

The Plant Line steamships' winter service went into operation Nov. 20, the steamship Halifax being placed on the Halifax-Boston route, while the A. W. Perry is undergoing repairs. When these are completed she will be sent south.

The steamboat Sincennes, recently purchased by D. J. Purdy, St. John, N.B., from the Sincennes-McNaughton Co., Montreal, struck a floating log in the St. John River, Nov. 15, and broke her paddle wheels. It is feared that she will not be ready to be placed on the route again before the close of navigation.

The Bathurst Lumber Co., Ltd., has been incorporated under the Dominion Companies Act, with a capital of $100,000 and office at Bathurst, N.B., to carry on the business of lumbermen, timber merchants, etc., and to construct, charter and employ steam and other vessels, and to carry on the businesses of wharfingers and vessel owners.

The Sydney, N.S., schooner Basutoland, from Point du Chene, bound for New York, struck at White Point, Nov. 13. She was

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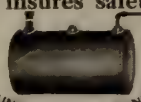

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subsequently floated and towed to Canso, but is waterlogged. She was built at Bath, Me., in 1870, and reconstructed at Liverpool, N.S., in 1903, her dimensions being: Length, 116.9 ft.; breadth, 29 ft.; depth, 8.4 ft.

Province of Quebec Marine.

The Dominion Government tugboat Jessie Hume collided with the tug Corrine, in Lake St. Peter recently, and an inquiry into the circumstances has been held by Commander O. G. V. Spain, Wreck Commissioner.

The Dominion Marine Association's executive committee has passed a resolution condemning the proposal to dam the St. Lawrence River in the interests of power companies, as being against the interests of navigation.

The proposed car ferry between Quebec and Levis was discussed at a meeting of the Quebec and Levis Ferry Co.'s directors, Nov. 14, but as plans and other information necessary to allow a decision to be arrived at had not been completed, nothing was settled. A special meeting to consider the plans, etc., will be held later.

The New Ontario Steamship Co.'s steamboat Neepawah crashed into the gates of lock 1, Lachine Canal, Nov. 12, carrying them away, and causing a considerable amount of damage to other shipping. The Montreal Transportation Co.'s barge Regina was caught in the wave and sank after colliding with the wharf in the river. She was loaded with 25,000 bush. of wheat, all of which, with the vessel, is lost. The barge Hurona, belonging to the same company, was also damaged to the extent of $5,000. The Department of Railways and Canals has held an investigation into the circumstances of the accident and the extent of the damage to the canal, while the Department of Marine will conduct an enquiry in order to fix the responsibility.

Ontario and Great Lakes Navigation.

The losses on the Great Lakes for Oct. are estimated at $500,000.

Tenders are being received for the purchase of the Richelieu and Ontario Navigation Co.'s steamboat Picton, which was burnt out in Toronto harbor recently, and abandoned to the underwriters.

R. Roddick, who has been in charge of the Gull lighthouse between Cobourg and Port Hope, Ont., for a number of years, resigned Nov. 18. His place has been taken by his brother, J. Roddick.

The Canadian Towing and Transportation Co.'s barges Onondaga and Black Diamond were sunk off Stoney Light Point, Lake Ontario, recently, while bound from Oswego, N.Y., to Montreal with coal.

It is reported that the Belle Isle and Windsor Ferry Co. has purchased Peche Island, which lies near the junction of Lake St. Clair and the Detroit River, and will establish a summer resort and park there.

W. McGannon, who was for 56 years a pilot on the St. Lawrence between Montreal and Toronto, chiefly in the employ of the Richelieu and Ontario Navigation Co., died at Windmill Point, Ont., Nov. 18, aged 88.

The steam barge Resolute, which sank in Toronto harbor last year, is being raised. Considerable work had been accomplished in this direction Nov. 23, and it was hoped that the raising would be completed by the end of the month.

Canadian Colored Marbles Ltd. has been incorporated under the Dominion Companies Act, with a capital of $375,000 and offices at Montreal, amongst other things, to build, charter and operate steam and other vessels for its purposes.

The Ontario Car Ferry Co.'s ferry steamboat Ontario No. 1 made her maiden trip between Cobourg, Ont., and Charlotte, N.Y., Nov. 14, with a full load of 26 cars, and passengers, being the first car ferry to cross Lake Ontario. She is making two trips a day between these points, with loaded coal cars, and it is hoped that it will be possible to operate her all the year round.

A plan has been submitted to the Port Arthur, Ont., City Council for a proposed breakwater to enclose the whole of the water front between Bare Point and the Kaministikwia River. The Dominion Government will be urged to proceed with construction, so that the harbor may be deepened to 26 ft.

The Montreal Transportation Co.'s barge Regina, which was sunk in the Montreal harbor by the accident to the Lachine Canal lock gates, was abandoned to the underwriters, who decided that it was not advisable to go to the expense of raising her. She was therefore broken up at once, as the wreckage was dangerous.

The U.S. lake survey reports the water levels in the Great Lakes, for Oct., as follows, the figures given being feet above tide water at New York: Superior, 603.19; Michigan, 581.19; Huron, 581.19; Erie, 572.71; Ontario, 246.37. With the exception of Lake Superior, all the levels are lower than in Sept., and a further lowering for Nov. should show: Superior, 1¾ ins.; Michigan and Huron, 2½ ins.; Erie, 2½ ins.; Ontario, 3½ ins. Lake Ontario was 11 ins. above the average Oct. depth of the last 10 years.

The Department of Marine has given notice that all Canadian lights and fog alarms in Lake Superior will be kept in operation until Dec. 10, except the Caribou Island light, which may not be kept in operation later than Dec. 5. All Canadian lights and fog alarms in Lake Huron, Georgian Bay, Lakes St. Clair, Erie and Ontario, will be kept in operation until Dec. 15, excepting at Lonely Island, Western Islands, and Red Rock, in Georgian Bay, which may not be operated later than Dec. 10. All Canadian lights in the River St. Lawrence will be kept in operation as long as navigation is open, and all gas buoys will be kept at their stations as long as ice conditions will admit.

Fleck Bros. Ltd. has been incorporated under the Dominion Companies Act, with a capital of $49,500 and offices in Ottawa, for the purposes of dealing in hewed timber for telegraph and telephone poles, etc., and to build, charter, purchase or otherwise acquire, all kinds of steam and other vessels, wharves, docks, elevators, etc., and to tow, carry passengers and freight, and generally carry on the business of an elevator, navigation and transportation company. The provisional directors are: A. W. Fleck, B. W. Fleck, H. G. Fleck, W. Greene, Ottawa, Ont.; and J. G. Fleck, Vancouver, B.C.

Manitoba, Saskatchewan and Alberta Navig'n.

The Post Office Department has made arrangements for mail service to Fort Smith and intermediate points along the Mackenzie River basin similar to that provided last year.

The season of navigation just closed on Lake Winnipeg is reported to have been very good. The general freighting showed an increase, but the fishing was not up to the average.

B.C. and Pacific Coast Marine.

A press report states that vessels will be constructed early next year, for service on the Skeena River, by the North-West Trading Co., and Capt. W. Langley.

The B.C. Transportation and Commercial Co. has deposited with the Dominion Public Works Department, plans of a proposed wharf in Telegraph Passage, Skeena River.

The C.P.R. steamship Charmer, which was damaged recently in a collision with the steamship Tartar of the same company, has been examined, and it is estimated that the necessary repairs will cost about $30,000.

The Hudson Bay Co. has placed a contract with A. Watson, Victoria, for the construction of two stern-wheel steamboats, for service on the Skeena River. One of these is to replace the steamboat Mount Royal, wrecked on July 6. The contract price is about $80,000. The machinery is to be built by the Polson Iron Works, Toronto. The dimensions are to be: length, 136 ft.; breadth, 36 ft.; with a deadweight capacity of 100 tons, and cabin accommodation for 40 passengers.

The C.P.R. freight steamship Princess Ena left Liverpool, Eng., for Victoria, Nov. 7, in charge of Capt. Cooper, formerly commander of the C.P.R. steamship Athenian, recently sold to a Japanese company. The Princess Ena, which is expected to arrive early in January, is of a somewhat different type to the majority of the company's vessels. She has been built with special consideration for cattle and lumber freights, and there is no passenger accommodation. Her dimensions are: length, 202 ft.; breadth, 38 ft.; depth, moulded, 17 ft. She has a flush deck, and extra large hatches and side ports.

Among the Express Cos.

N. J. Robinson, Dominion Ex. Co.'s messenger, Winnipeg, was killed in an accident on the C.P.R., at Regina, Sask., recently.

Telegraph and Cable Matters.

The G.T.R. has applied for a board of conciliation and investigation under the Labor Act, to take up all points at issue between the company and its telegraph operators.

W. F. Shiebler, who received the first message over the Atlantic cable, died Nov. 13, at Brooklyn, N.Y. He was later placed in charge of the first military telegraph station established in the U.S.

The construction of a telegraph office for the Dominion Government at Saskatoon, Sask., has been commenced. The building, which is to be of timber, will be 26 by 30 ft., and two stories high, and will include an operator's residence.

The award of the Board of Conciliation, consisting of Prof. Adam Shortt, W. Nesbitt, K.C., and J. Campbell, recently appointed to investigate the demands of the Temiskaming and Northern Ontario Ry. telegraphers, etc., will be issued shortly.

The Canadian Northern Telegraph Co. submitted a plan of a proposed line from Winchester St. to its head office, Toronto St., Toronto, to the city Board of Control, Nov. 15. The application was referred to the City Engineer for a report as to what portion of the line it was advisable to place underground.

W. M. Napper, a boat builder at Lake Geneva, Wis., who was engaged on the old Great Eastern at the time she was chartered to lay the cable between Newfoundland and the coast of Ireland, is still living there at the age of 67. In connection with the 50th anniversary of the laying of the cable, he recently related his experiences on board at the time.

One of the difficulties attendant on the wireless transmission of telegraphic signals has been the absorbing power of daylight on the Hertzian waves. This is in a fair way to being overcome. A system of impulses of a somewhat different nature has been tried with success, whereby the absorption by daylight has been reduced to a minimum. The new system is not so efficient by night as the old, but it is claimed that the advantage by daylight will compensate for any difference.

General Telephone Matters.

Work has been commenced on a telephone line between Lumby and Vernon, B.C.

The extension of the Niagara District Telephone Co.'s line to Silverdale is practically completed.

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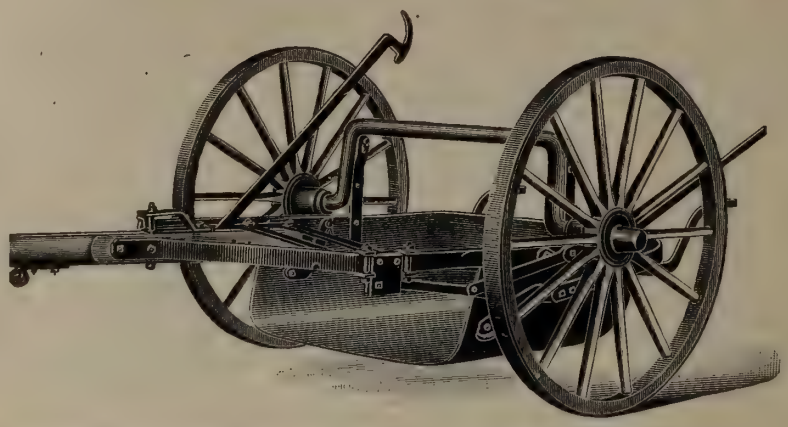

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BOSTON, MASS.

Construction has been commenced by the Blenheim and South Kent Telephone Co. on its line to Guilds, Ont.

It is proposed to start a public telephone system at Woodstock, N.B., under the name of the Citizens' Telephone Co., with a capital of $24,000.

The ratepayers of Havelock, Ont., recently asked the Havelock Electric Light and Power Co. to instal and operate a telephone system in that town.

The Minneapolis Street and Town Lighting Co., of Minneapolis, Minn., has applied for a franchise for the supply of a telephone system to the town of Carnduff, Sask.

The Saskatchewan Government is having a survey made for the construction of a telephone line from Fort Qu'Appelle, passing through Lebret to Balcarres, thence to File Hills Indian agency.

Considerable improvements and extensions of line are to be undertaken by the Yarmouth (N.S.) Amalgamated Telephone Co., and the capital of the company is to be increased to $50,000 for that purpose.

The Burgessville Telephone Co. is extending its lines on the metallic circuit system. Connections have been made with Ingersoll and Harrietsville, and connections with Buffalo and other places in New York State are under consideration.

The People's Telephone Co., of Maynooth, Ont., operates about 150 miles of line with about 200 instruments. The officers are: President, W. J. Sargent; Vice-President, W. J. Fitzgerald; Treasurer, H. Harriett; Secretary and Manager, J. Harriett; while D. Smith, J. E. Weaver and S. Harriett are directors.

Province of Quebec Marine.

A Marconi wireless telegraph station has been opened at Three Rivers, Que., which will enable vessels equipped with the wireless apparatus to keep in communication with the shore line of telegraphs between Montreal and Quebec.

CANADIAN PACIFIC RAILWAY CO.

NOTICE TO SHAREHOLDERS

THE sanction of the shareholders is required before the Directors can issue the balance of the authorized ordinary capital stock of the Company that is unissued, namely, twenty-eight million three hundred and twenty thousand dollars ($28,320,000), and as it is desirable that the Directors should be empowered to make the issue when in their discretion they may deem it in the Company's interest to do so, a Special General Meeting will be held in accordance with the following Notice:

A Special General Meeting of the Shareholders of the Company will be held at the principal office of the Company at Montreal on Monday, the thirtieth day of December next, at noon, for the purpose of considering and, if approved, of authorizing the issue of ordinary capital stock of the Company to the amount of twenty-eight million three hundred and twenty thousand dollars, being the balance of the unissued ordinary capital stock of the Company heretofore authorized, such issue to be made in such amounts and at such times, according to the requirements of the Company, as the Directors may determine.

The Ordinary Stock Transfer Books will close in Montreal, New York and London at three p.m. on December 9th next. The Preference Stock Books will close in London at three p.m. on the same date.

All books will be re-opened on Tuesday, December 31st.

By order of the board.

CHARLES DRINKWATER,
Secretary.

Montreal, 28th November, 1907.

ELECTRIC RAILWAYS.

Projects, Construction and Betterments.

Berlin and Waterloo Ry.—The Berlin St. Ry. Commission has purchased three cars from the St. John (N B.) Ry., which have been in use for about a year, and are equipped with four motors and air brakes, and are heated by electricity.

Brantford and Hamilton Ry.—The laying of rails has been completed almost to Brantford, and it is proposed to run a partial service thereon.

British Columbia Electric Ry.—It is stated that extensions and improvements to plant and rolling stock at Victoria are contemplated, involving an expenditure of about $200,000, including an extension to Uplands and Ross Bay cemetery on the Cadboro Bay line, and possibly through to Foul Bay.

Hon. Maurice Gifford stated, Nov. 1, that it was almost certain that the company would immediately formulate plans for the construction of a water power plant for the city of Victoria, for the supply of power for the Victoria-Saanich line, using the minimum supply from the Esquimalt Power Co. for the remainder of the contract term.

Tenders for the construction of the first portion of the New Westminster-Chilliwack line from New Westminster to Cloverdale are under consideration.

The contract for the additions to car barns in Store St., Victoria, has been let to W. A. Gleason, Victoria, at $10,000.

Buffalo, Niagara and Toronto Ry.—Options have been arranged on lands for a right-of-way from Falls View to the Niagara, St. Catharines and Toronto main line near Stamford station, and the clearing of the route has been commenced. The lands acquired are parts of the right-of-way from Buffalo to Niagara-on-the-Lake, and it is stated that part of the route may be used for a power transmission line to St. Catharines.

Calgary St. Ry.—The tenders received for about 13 miles of street track, with overhead trolley work, six semi-convertible cars with equipment, and a steel bridge with concrete abutments were dealt with by the city council committee, Nov. 8. The amount allowed for the work by by-law is $250,000, and the only complete tender received was for $357,576. The committee decided to report to the council, and to recommend that further tenders be invited. (Nov., pg. 841).

Cobalt-Haileybury Electric Ry.—The municipal councils of Cobalt and Haileybury, and the councils of Coleman and Bucke have granted a franchise for the construction of an electric railway between Cobalt and Haileybury, Ont. It is proposed to run a line up the Montreal River valley, through Cobalt, Haileybury, Argentite, North Cobalt, and New Liskeard to Quinze rapids, and ultimately to Larder Lake. An hourly service between Cobalt and Haileybury, and a half-hourly service in the municipalities is talked of. The promoters say they hope to have the road completed by July, 1909. F. Latchford, J. W. Fitzpatrick, Ottawa; T. Fitzpatrick, New Liskeard; W. J. O'Brien, Renfrew, and C. M. Stone, Cleveland, Ohio, are the interested parties.

Chatham, Wallaceburg and Lake Erie Electric Ry.—Application is being made for an order to compel the executors of the Inches estate to allow the company to lay its tracks on the west side of Queen St., Chatham. The city granted the company permission to lay its tracks along the center of Queen St., for construction purposes only, and refuses to give permission for permanent tracks to be laid there. The trustees of the Inches estate say it is being laid out for residential purposes, and the laying of tracks on the west side of the street would depreciate the value of the property. (Oct., pg. 759).

Work is to be commenced on the subway under the M.C. Rd. tracks at Charing Cross, Ont., and it is hoped to have cars running through from Wallaceburg to the lake, about 35 miles, shortly. It is proposed to connect up with the Windsor, Essex and Lake Shore Rapid Ry., possibly during next year.

Hamilton, Grimsby and Beamsville Electric Ry.—Arrangements have been made for cars to run from the new terminal station in Hamilton, and the old H.G. and B.R. offices and sheds on Main and Catharine streets will in future be used for freight sheds for all the Dominion Power and Transmission Co.'s lines. C. Green has been appointed traction manager; G. E. Waller, general freight and passenger manager; A. Orr, chief clerk in the freight and passenger departments, and J. M. Seabrook and L. Pfeiffer, ticket agents, under the new arrangements.

Hamilton Radial Ry.—The city of Toronto has withdrawn its opposition to the H.R.R. Co.'s bill which is to be brought before Parliament at its next session, as the company has inserted a clause therein, whereby it agrees not to construct a line along any highway without obtaining the consent of the municipalities concerned.

London St. Ry.—The curve on Richmond St. which was stated to be dangerous when two cars passed, has been reconstructed to avoid any possibility of danger.

The company has agreed to pay $582, its share of the repairs to Beaconsfield Ave.

A request for a plebiscite on the question of a Sunday car service was ruled out of order at a meeting of the city council recently, on the ground that it had been already dealt with.

C. B. King, Manager, requested the city council, Nov. 7, to insert a clause in the by-laws under consideration, giving the company the privilege of using 70-lb. high T rails in 60 ft. lengths instead of the grooved rail. The request was granted.

Montreal and Southern Counties Ry.—A delegation of manufacturers located in Mill St. recently opposed the application of the company to construct a track along Mill St., and stated that the street was too narrow. It transpired that the street is wider than either McGill or Notre Dame streets, on which there are already tracks in use. The application was adjourned to allow of more detailed plans being submited.

Niagara Peninsula Ry.—The plans of the proposed route have been certified by the Ontario Railway and Municipal Board. The line will run from Port Colborne through the townships of Humberstone and Wainfleet.

The Niagara, St. Catharines and Toronto Ry. Co. will make application at the forthcoming session of the Dominion Parliament for an act extending the time within which it may construct the railway and branches which it is already authorized to do.

North Midland Ry.—A. E. Welch, of the South-Western Traction Co., London, Ont., stated, Nov. 7, that an English firm was arranging to undertake the construction of an electric railway from London to Stratford, Ont., under the charter of the N.M.R. Co. The proposed line would to some extent parallel the G.T.R., but would touch at some points which the latter does not serve. Mr. Welch was in Stratford Nov. 5, looking over the district with a view of selecting the best route for an entrance to the city. He said a proposition would shortly be made to the city council in connection with the project. (Jan., pg. 45).

Ontario West Shore Electric Ry.—The route proposed for this line is from near

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Montreal, Que.	Ottawa, Ont.	Quebec, Que.
St. John, N.B.	Toronto, Ont.	Vancouver, B.C.
Calgary, Alta.		Winnipeg, Man.

THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Amberley, along the Saugeen road to Kincardine, Ont. The company proposes to endeavor to raise the funds required for the construction of the line, in either Great Britain or the United States, by the sale of its bonds. The municipalities through which it is intended to run the line will be asked to guarantee the bonds.

The Ottawa Electric Ry. Co. has expressed its willingness to share the cost of constructing the proposed viaduct, provided it is not called upon to widen the Somerset St. bridge. It is possible that this street bridge may be abandoned entirely as far as street railway traffic is concerned.

St. John (N.B.) Ry.—The work of double tracking the line in various parts of the city is practically completed. An application for an injunction to restrain the company from carrying out a part of the work had been applied for, but permission had been obtained, and it was expected that the tracklaying would be completed before the application could be heard.

St. Joseph and Stratford Radial Ry.—N. Cantin, the founder of St. Joseph, on the Ontario shore of Lake Huron, and the principal promoter of a number of industrial projects in connection therewith, amongst which is the construction of an electric railway to connect St. Joseph with Stratford, Ont., in an interview recently said, that the stories going about that the town was to be sold were incorrect. It was true that notices of sale by the sheriff had been given several times, but he had always managed to find the money required to keep his engagements. He had already expended $600,000 in his projects at St. Joseph, but considerably more money would have to be found. The Dominion Government was constructing a wharf, and when this and the electric railway were completed the town would go ahead. In regard to the electric railway he said that a considerable portion of the right-of-way had already been purchased, and negotiations were in progress for a further mileage. (April, pg. 271).

Sarnia St. Ry.—The Sarnia town council has passed a by-law permitting the company to construct about 1½ miles of track, to be completed by Dec. 1, 1908.

Southwestern Traction Co.—The service from London to Port Stanley, Ont., was commenced recently, a number of invited guests taking part in the inaugural trip.

A freight and express shed is being erected at Horton St., London, and it is proposed to erect a station also. The freight shed is nearing completion, but the station building is not to be commenced this year.

Strathcona Radial Tramway Co.—J. Walter, President, stated recently that reports to the effect that the company was anxious to sell out were incorrect. If the franchise were granted, the company would be quite prepared to finance and construct the system outlined.

A right-of-way has been purchased into the centre of Edmonton, and the company are asking for running rights over one or two streets which it is necessary to cross.

Sydney Mines (N.S.).—A proposal is on foot to construct an electric railway to Sydney no. 3 mine, and eventually to no. 4, and through to little Bras d'Or. It was anticipated that the Cape Breton Electric Ry. Co. would extend its line to cover the points named, but the scheme has not materialized. By the terms of the agreement between the C.B.E.R. Co. and the town council, any persons can, after May 28, 1908, construct a tram line on any street in the town not already covered, with the consent of the council. If the company does not construct the line by that time the promoters of the present scheme propose to take it in hand.

Toronto Ry.—A portion of the tracks on Yonge St., ¾ mile north of Scollard St., has been relaid with new 90-lb. rails, in 60 ft. lengths.

The relaying of the tracks between Kingston Road and Woodbine Ave. is proceeding, and in the meantime stub line cars are being utilized between the point of operation and Scarboro' Beach.

Pending the relaying of tracks on Dundas St., Toronto Junction, and the settlement of the dispute between the company and the council there, a stub line service is to be supplied from the Dundas St. car barns to the city limits as soon as possible.

Windsor and Tecumseh Ry.—The township of East Sandwich has applied to the Ontario Railway and Municipal Board for an order against the company to grade and extend Ottawa St., to supply better cars, and to sell 10 tickets for 25c. to school children whether they attend school in the country or in Detroit, Mich., as per contract. See also Sandwich, Windsor and Amherstburg Ry.

Electric Railway Notes.

The Sydney and Glace Bay Ry. Co., Sydney, N.S., wants a man to take charge of its equipment, including engines, boilers, generators, and cars.

The Omaha (U.S.) St. Ry. Co. recently paid out in wages, on one month's pay-roll, 600,000 five cent pieces, which had been retained for the purpose in view of the financial stringency there.

The Ontario Railway and Municipal Board has approved of the appointment of J. E. Hutcheson, R. Ingram and G. W. Lang, as examiners of motormen for the Ottawa Electric Ry. Co.

P. G. Gossler, of the J. G. White Co., New York, and at one time with the Montreal Light, Heat and Power Co., has been elected President of the Pottsville Union Traction Co., of Pottsville, Pa.

In pursuance of the Ontario Railway and Municipal Board's order regarding the provision of doors for the vestibules of Toronto Ry. cars, these have been provided, and will be fixed in place immediately it is considered necessary to do so.

R. M. Horne-Payne, Chairman of the B.C. Electric Ry. Co., at a meeting of shareholders in London, Eng., Nov. 15, said that Canadians might point with pride to the fact that no serious monetary crisis had arisen there. A debt of gratitude was due to the managers of the great Canadian banks, whose foresight produced such results.

The buildings at Dominion Park, Montreal, were destroyed by fire Nov. 6, the damage being estimated at about $100,000. The insurance carried on the buildings affected was about $85,000. The directors of the company decided, at a meeting held Nov. 9, to reconstruct the buildings at once. A number of Montreal St. Ry. Co.'s directors are interested in the Park Co.

The Ontario Railway and Municipal Board is considering what steps it may take respecting the enforcement of its order of April last, respecting the overcrowding of the Toronto Ry. Co.'s cars, when 15 miles of new track were directed to be laid and 100 new cars placed in service. The company has waited on the city to designate the streets on which tracks were to be laid, but this has not been done, and it is possible that the Board may consider it within its jurisdiction to do so without consulting the city. R. J. Fleming, Manager, recently stated that 25 of the new cars were practically ready, and would be placed in service as soon as the weather demanded the complete removal of all open cars from the routes.

Electric Ry. Finance, Meetings, Etc.

British Columbia Electric Ry.—Gross earnings for Sept., $152,568, against $114,221 for Sept., 1906. Working expenses, $79,227; renewal fund, $10,750; net earnings, $62,591; income from investments, $11,036; net income, $73,627; against $56,202 working expenses; $9,638 renewal fund; $48,381 net earnings; $9,536 income from investments, and $57,917, net income for Sept., 1906. Earnings for three months ended Sept. 30, $456,334 gross; $219,569 net; against $329,457 gross, and $160,302 net, for same period 1906.

At a meeting of directors in London, Eng., Nov. 7, it was recommended that the deferred and ordinary stocks be placed on a dividend basis, at 8% and 6% respectively.

Grand Valley Ry. Co.—An Order-in-Council has sanctioned the agreements entered into by this company, and the Brantford St. Ry., and the Woodstock, Thames Valley and Ingersoll Ry. Cos. for the purchase of the two latter. (June, pp. 427, 428)

The Brantford City Council has passed a by-law granting a franchise for a period of 50 years, during the last 25 years of which the company will pay to the city $2,500 a year. All local tracks will be reconstructed within a year, and the proposed extensions completed in two years. No stipulations have been made regarding Sunday car service. (Nov., pg. 841).

Halifax Electric Tramway Co.—Earnings for Oct., $14,403.93, against $16,096.58 for Oct., 1906.

Montreal St. Ry.—Total earnings for Oct., $311,898.38; operating expenses, $164,575.14; net earnings, $147,323.24; city percentage on earnings, $10,822.02; interest on bonds and loans, $16,706.31; contingent for renewals, $15,420.48; rent leased lines, $339.96; surplus, $104,034.47; against $281,822.28 total earnings; $157,689.47 operating expenses; $124,132.81 net earnings; $9,668.62 city percentage on earnings; $16,850.17 interest on bonds and loans; $14,091.11 contingent for renewals; no rent leased lines; and $83,522.91 surplus for Oct., 1906.

Quebec Ry., Light and Power Co.—The Dominion Parliament will be asked at its forthcoming session for an act amending the act of incorporation, providing for an increase of capital stock, the division of such stock into common and preferred shares, and to alter the date of the general meeting.

Sandwich, Windsor and Amherstburg Ry.—The Ontario Railway and Municipal Board has approved of the lease for 99 years of the Windsor and Tecumseh Ry., running from Walkerville to Tecumseh, a distance of about 12 miles, to the S. W. and A. Ry. (Aug., pg. 605).

Toronto Ry.—Car earnings for Oct., $290,443.51, against $264,860.61 for Oct., 1906. Approximate earnings for 10 months ended Oct. 31, $2,822,607, an increase of about $282,580 over those for the same period 1906. Operating expenses show a proportion to earnings of 53.7% against 52.9% for 1906. The percentage of earnings paid to the city for Oct. was $23,551.57, against $20,688.38 for Oct., 1906, and $12,370.48 for Oct., 1902.

Winnipeg Electric Ry.—The city solicitor has been instructed to proceed against the company to enforce payment of the amount alleged to be due to the city for default of service as provided by by-law. The city claims $9,930 at the rate of $10 a day while such default continues The claim is to be defended.

The Southwestern Traction Co., has inaugurated an express and freight service between London, St. Thomas and Port Stanley.

International Ry. Employes' Association.

This Association, which has its headquarters in Buffalo, N.Y., issued its 7th annual report Nov. 1, showing a membership of 1,527, comprising 58% of all employes of the International Ry. system, trackmen excepted. The increase in receipts for the year was $1,404.89, and increase in death benefits paid $550.00. The increase in sick benefits and medical attendance paid during the year was $889.00. Notwithstanding these increased expenditures, the surplus increased during the year $3,048.85, reaching a total of $14,269.18. During the year $3,930 was in International Traction Co. bonds; the total amount invested in securities of all kinds being $12,367.50. During the year the International Ry. Co. contributed $3,082.56 towards the expenses of the Association in addition to the free use of the club rooms at Virginia St. Since the organization of the Association seven years ago, the members have paid for dues and initiation fees $56,989.32, and with payments to the beneficiaries of 37 members who have died and also payments to members for sick benefits and medical attendance, the members have paid into the Association but $724.81 more than has been returned to them and their beneficiaries. There is a surplus of $14,269.18, resulting almost entirely from donations from the International Ry. Co. and others, interest on securities and profits from the annual ball. The experience of the past warrants the belief that this will be sufficient to provide for the future obligations of the Association.

The year's income account contains the following receipts: Initiations, $967; Dues, $8,730; toilet supply, $117.25; interest receivable, $608.16; sale of lost articles, $85.06; net proceeds of ball, $2,191.22; total, $12,698.69. The disbursements were: sick benefits, $6,430; death benefits, $1,200; medical attendance, $2,019.84, total, $9,649.84: net surplus, $3,048.85.

The Edmonton, Yukon and Pacific Railway Co.

Notice is hereby given that the Edmonton, Yukon & Pacific Railway Company will apply to the Parliament of Canada at its next session for an act empowering it to construct and operate a branch line from a point on its authorized line to Vancouver, and a branch or branches from a point or points on its authorized line to the headwaters of the McLeod and Brazeau rivers, and extending the time for the completion of its line from a point on its authorized line either to the Yellow Head Pass or to the Peace River Pass, and thence by such route as is found or deemed most practicable to a port in British Columbia, or to connect with the authorized line of the British Pacific Railway Company.

GEO. F. MACDONNELL,
1 Toronto St., Toronto, Asst. Solicitor.

Toronto, Ont., Nov. 18, 1907.

THE CANADIAN NORTHERN QUEBEC RAILWAY COMPANY.

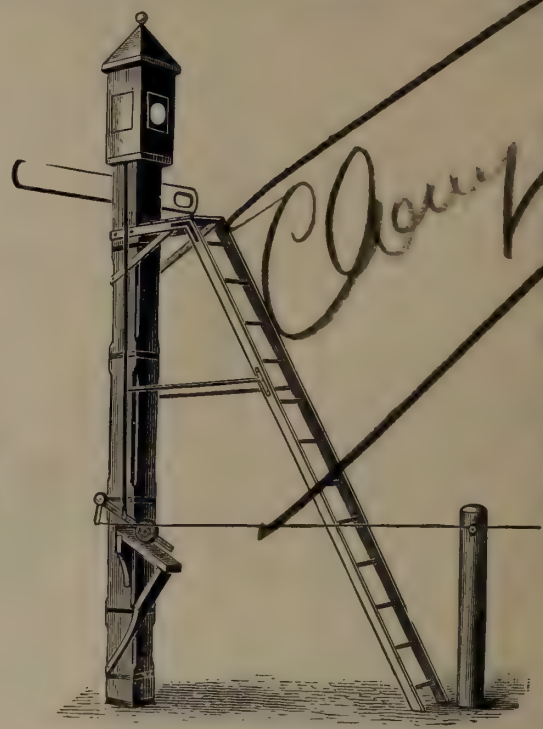
NOTICE is hereby given that The Canadian Northern Quebec Railway Company will apply to the Parliament of Canada, at its next session, for an Act empowering it to construct and operate a line of railway from St. Jerome to St. Eustache, and a line of railway from Ottawa, via Hawkesbury, to Montreal, branching on Montreal Island to enter Montreal from the north-east and south-west.

GEO. F. MACDONNELL,
1 Toronto St., Toronto,
Assistant Solicitor.

Toronto, Ontario, 18th November, 1907.

THE N. L. PIPER RAILWAY SUPPLY CO.
LIMITED
314 Front St. West, Toronto

Manufacturers of Ship, Street and Railway Lamps, Etc.



Dealers in Chimneys, Burners, Wick, Fusees, Torpedoes, Etc.

PIPER'S PATENT DISTANT SEMAPHORE

Montreal Street Railway Company.

The report for the year ended Sept. 30, 1907, was presented at the annual meeting, Nov. 6, as follows: Your directors beg to submit their 47th annual report, accompanied by the financial statements, which show the following results:

Gross earnings		$3,503,643.43
Operating expenses		2,104,653.42
Net earnings		$1,398,990.01
To which add: Received from M.P. & I. Ry. on account of interest		55,101.44
Total net revenue		$1,454,091.45
From which deduct:		
City per cent. on earnings	$214,840.36	
Interest on bonds and l'ns.	195,833.64	
Contingent account for renewals	171,517.04	
Rental of leased lines	3,059.64	
		585,250.68
Surplus		$868,840.77
From this there has been paid 4 quarterly dividends of 2¼% each	$768,100.00	
Placed to the credit of fire insurance fund	25,000.00	
		793,100.00
Transferred to surplus account		$ 75,740.77

The gross earnings increased during the year $403,156.55, or 13.00%; the operating expenses, $253,933.45, or 13.72%; the net earnings, $149,223.10, or 11.94%. The operating expenses for the year were 60.07% of the gross earnings, as compared with 59.69% in 1906. The increase in expenses is largely due to the increased wages paid to the men and the principal increase in fixed charges is due to the increased payment made to the City of Montreal for percentage on earnings. Your directors have continued the policy adopted of setting aside a certain percentage of gross earnings each month to the credit of contingent renewal account to meet the extensive renewals to the system of tracks, etc. This amount added to the balance of $7,816.94 carried forward from the previous year, makes a total credit to this account of $179,333.98, against which has been charged $167,696.12, expended during the year; $25,000.00 has been placed to the credit of fire insurance fund; the interest on the investments for the year for this fund were to $15,438.75. The amount now at the credit of the fund is $381,450.93.

Your directors expect to receive power from the new power house now being erected on Notre Dame Street in Dec., in time to help out the heavy requirements due to the winter load and conditions. The storage batteries installed at the St. Henri and St. Denis substations have been in operation during the year and have given entire satisfaction. It is expected that the battery station at Maisonneuve will be completed in Nov.

In accordance with the power conferred on the directors by the shareholders on Nov. 7, 1906, $2,000,000 of stock was issued to the shareholders at a premium of 75. This stock was all subscribed for and the calls on the same have been promptly met. The last call falls due Oct. 15. The premium on the stock, $1,372,192.50, has been placed to the credit of surplus account. Owing to the conditions of the money market and in order to provide funds for the purchase of the Montreal Terminal Ry., £208,000 of the company's notes were negotiated in England.

In the city proper few extensions have been made, as the city has not seen fit to grant any new routes, notwithstanding that the company has persistently urged the council to consider the question of granting new routes in order to meet the growing requirements of the public. This attitude is to be regretted, as the company has been, and is, anxious to keep well ahead of the requirements in order that the public may get the best possible satisfaction from its car service. Your directors intend to continue to press this matter upon the council in the hope that they will soon realize the importance of considering and

dealing with a question of such public importance.

In accordance with the wishes of the shareholders expressed at the last annual meeting, your directors applied to the Quebec Legislature for power to increase the number of directors to seven. This application was granted and your directors appointed to the board P. Galibert and G. Caverhill, to fill the number until the annual meeting should be held.

Your directors regret to have to report the death of one of their members, Lt.-Col. F. C. Henshaw, and in doing so, take the opportunity of paying tribute to his efforts and able assistance to the Board in the many and complex questions arising from time to time. Col. Henshaw was an enthusiastic believer in the company, and a regular attendant at the meetings until his health precluded it.

An agreement has been entered into with the Montreal Park & Island Ry. Co., whereby its tracks, situated in the town of Outremont, are leased to this company.

At the request of a number of shareholders and financial institutions, your directors decided that it would be to the interest of the shareholders that negotiable stock certificates be issued, covering the fully paid-up stock of the company, and on May 1 last, the same was put into effect.

The company has paid to the City of Montreal the usual property and business taxes and tax on earnings, $229,672.45, an increase of $37,975.86; account snow cleaning, $66,-647.27, making a total $296,319.72.

The Montreal Park & Island Ry. Co. has, during the past year, shown satisfactory results. In past years the M.P. & I.R. has been a charge on the Montreal St. Ry., but this year the company has shown improved earnings and was enabled to pay to the Street Railway Co. $55,101.44 on account of interest, and your directors believe that the returns from this investment will continue to increase. The M.P. & I.R. Co. has entered into a franchise with Notre Dame de Grace, for the extension of its system through the municipality extending over 50 years, and has secured a right-of-way from the present terminus of the Back River route to a point outside the village of St. Vincent de Paul, on the south shore of the river. During the past year additional right-of-way was purchased on the Cartierville line in order to permit the continuing of double tracking in this division.

The Montreal Terminal Railway purchase was completed on July 1, and your directors anticipate that this property will become a valuable asset to your shareholders in the future.

ASSETS.

Cost of road and equipment:		
Construction, etc.	$4,536,714.59	
Equipment, etc.	4,889,039.38	
Real estate and build'gs	2,086,086.90	
Stock and bonds of other companies	3,200,906.35	
		$14,712,747.22

CURRENT ASSETS.

Stores	$ 421,177.66	
Accounts receivable	111,832.74	
Montreal Park & Island Ry. advances	250,619.65	
Montreal Terminal Ry. advances	41,137.58	
Cash in bank and in hand	309,886.67	
		1,134,654.30
Fire insurance fund investment		370,153.50
		$16,217,555.02

LIABILITIES.

Capital stock	$8,829,590.00	
Bonds:		
5% payable Mar., 1908	292,000.00	
4½% payable Aug., 1922	681,333.33	
4½% payable Nov., 1922	1,500,000.00	
Mortgages	93,034.51	
		$11,395,957.84

CURRENT LIABILITIES.

Bank of Montreal loan	$ 500,000.00	
Bills payable, £208,000	1,010,030.92	
Acc'ts and wages payable	190,971.61	
Accrued interest on bonds and loans	50,002.33	
Accrued tax on earnings	224,489.16	
Employes' securities	16,377.10	
Unclaimed dividends	1,956.57	
Unredeemed tickets	44,357.04	
Dividend payable Nov. 1, 1907	213,000.00	
Suspense account	204,620.33	
		2,455,805.06
Fire insurance fund	$ 381,450.93	
Contingent account	11,637.86	
Surplus	$ 600,510.83	
Premium stock	1,372,192.50	
	1,972,703.33	
		2,365,792.12
		$16,217,555.02

PROFIT AND LOSS ACCOUNT.

Net earnings from operation	$1,398,990.01
Interest from Montreal Park & Island Ry	55,101.44
	$1,454,091.45
City percentage on earnings	$ 214,840.36
Interest on bonds and loans	195,833.64
Rental of leased lines	3,059.64
Dividends—(payable quarterly)	768,100.00
Contingent account	171,517.04
Fire insurance fund	25,000.00
Surplus account	75,740.77
	$1,454,091.45

STOCKS AND BONDS, ETC., IN TREASURY

BONDS:	
Montreal Park & Island Ry. Co.	$1,025,000.00
Montreal Park & Island Ry. Co. overdue interest (not included in assets).	658,263.63
Montreal Terminal Ry. Co.	613,000.00
Suburban Tramway and Power Co.	750,000.00
	$3,046,263.63
STOCKS:	
Montreal Park & Island Ry. common	$ 720,900.00
Montreal Park & Island Ry. preferred	315,000.00
Montreal Terminal Ry. Co.	1,000,000.00
Suburban Tramway and Power Co.	750,000.00
	$2,785,900.00
Total bonds and stocks	$5,832,163.63

MONTREAL PARK & ISLAND RY. BALANCE SHEET, YEAR ENDED AUG. 31 1907.

ASSETS.

Cost of road and equipment	$2,328,196.70
Office change fund	2,000.00
Accounts receivable	1,437.62
Profit and loss	862,926.46
Contingent account	
	$3,194,560.78

LIABILITIES.

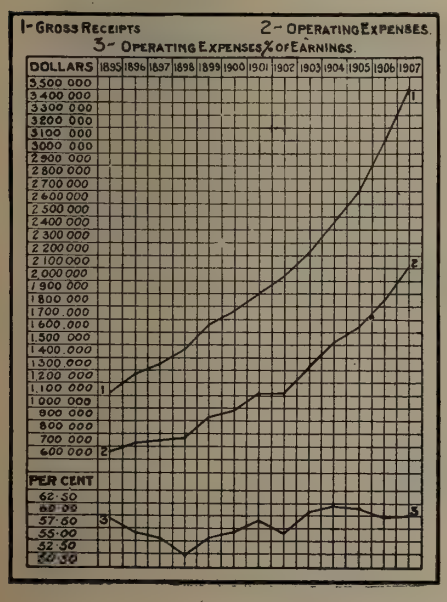
Capital stock, preferred	$ 315,000.00
Capital stock, common	720,900.00
Bonds	1,025,000.00
Mortgages	
Unredeemed tickets	11,780.28
Suspense account	25,609.20
Contingent account	9,686.63
Montreal St. Ry. Co.'s loan	204,272.05
Accrued interest on bonds	700,581.34
Cumulative dividend on pref. stock	181,731.28
	$3,194,560.78

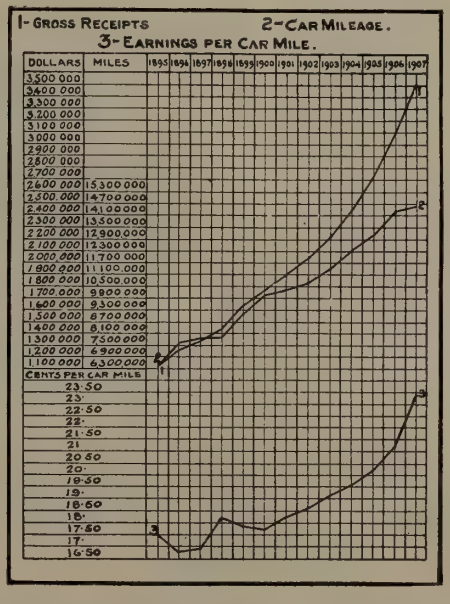
MONTREAL PARK & ISLAND RY. CO. INCOME ACCOUNT.

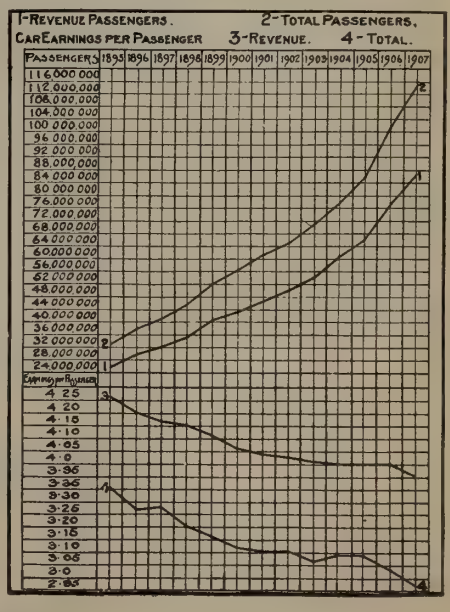
Gross earnings		$262,814.17
Operating expenses		180,931.06
Net earnings		81,883.11
Contingent for renewals		26,713.86
Net income		55,169.25
Fixed charges—Bonds and loans	$106,118.40	
Cumulative pref. shares	18,900.00	
		125,018.40
Deficit		$ 69,849.15

The directors were re-elected and the vacancy caused by Col. Henshaw's death was filled by the election of R. Meighen. The board for the current year is constituted as follows: President, Hon. L. J. Forget; Vice-President, K. W. Blackwell; Managing Director, W. G. Ross; other directors: Sir H. Montagu Allan, G. Caverhill, R. Meighen. The Secretary is Patrick Dubee.

It will be noted above that under the head of assets, the stocks and bonds of other companies are placed at $3,200,906.35, while under the head of stocks and bonds, etc., in treasury they are put as $5,832,163.63. We are advised that the amount under the head of assets is the actual sum paid for the securities, while under the head of stocks and bonds, etc., in treasury the amount given is the par value of the securities.







MONTREAL STREET RAILWAY COMPANY—GRAPHIC STATISTICS.

WINTER IS COMING

MASTER MECHANICS

As our factory is becoming crowded with orders, it is now time to place your requisitions with us for the Priest Snow Flangers, so as to ensure prompt delivery.

The PRIEST SNOW FLANGER is the result of years of experience, and is now the only Flanger applicable to a locomotive which meets all requirements, and is perfectly safe to operate. Prices and Literature on application to

N. J. HOLDEN CO., LIMITED

302 ST. JAMES ST., MONTREAL 42 YORK ST., TORONTO, ONT.

EDWARDS WINDOWS

WINDOW FIXTURES. SHADE ROLLERS. SASH BALANCES.

TRADE "PAOWNYC" MARK

EXTENSION PLATFORM TRAP DOORS

FOR BLUE PRINTS AND INFORMATION, ADDRESS

THE O. M. EDWARDS CO.

SYRACUSE, N.Y.

CANADIAN FACTORY, ST CATHARINES, ONT.

KERR'S GLOBE AND GATE VALVES

STRICTLY HIGH GRADE. TESTED & PACKED

THE KERR ENGINE CO. LIMITED

VALVE AND HYDRANT MANUFACTURERS

WALKERVILLE, ONT.

E. B. LEIGH, Pres. & Gen. Mgr.

GENERAL OFFICES :
40th St. and Princeton Ave.
CHICAGO, - - ILLINOIS

CHICAGO RAILWAY EQUIPMENT CO.

LESSEE

DIAMOND, CRECO, KEWANEE and all types of solid brake beams
More than 5,000,000 now in use
MONITOR BOLSTERS AND "CRECO" ROLLER SIDE BEARINGS

CANADIAN OFFICE :
22 St. John Street
MONTREAL, - QUEBEC

I. A. YOUNG, AGENT

Hamilton Terminal Company's Station.

The station which has been built by the Hamilton Terminal Co., Ltd., on King St. East, Hamilton, Ont., is one of the most imposing structures in that city and stands out in bold relief to its surroundings.

It is thoroughly fireproof, being constructed of solid masonry and terra cotta with metal frames. The outside is of Indiana blue limestone for the first story and of pressed brick with trimmings of terra cotta above. The cornices and balustrades are all of terra cotta, richly ornamented. On the roof is a large clock with a dial 6 ft. in diameter, surmounted by a flag pole. The interior column and beam construction are of reinforced concrete surrounded by terra cotta blocks. The floors are hollow 8 x 10 tile and reinforced beams 5 ins. wide, alternating, allowing of large floor slabs, 22 ft. x 70 ins. On top of these is laid the usual construction of cinder concrete as a filler in between the 2 x 3 sleepers, on which is nailed the ward wood flooring for office rooms and solid Terrazzo construction 3 ins. thick for corridors and public spaces.

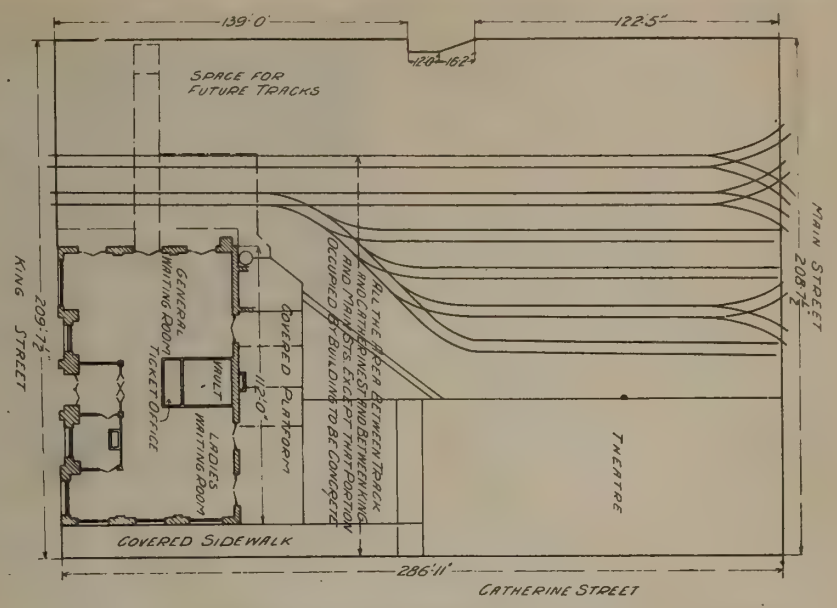
The main entrance doorway is a very handsome affair of richly carved stone, and at either side stand two magnificent bronze electroliers on stone pedestals. The entrance vestibule is 22 x 22 ft., and in the floor is a large monogram D.P. & T. Co., standing for Dominion Power and Transmission Co., which controls several companies whose offices and terminals are in the station building. The station floor consists of one large room 68 by 108 ft. Its floor is laid in ceramic tile with borders. The ceiling is 20 feet high, and the walls are wainscoted to a height of 10 ft. with English veined Italian marble. In the front part of the building is the ticket office, which is entered through the vestibule door. Immediately behind it is a large fire and burglar proof vault 16 ft. square, which runs from the basement to the second floor, which also has its Mezzanine floors, making four stories high inside and connected with each other by spiral iron staircases. To the right of the main entrance is an electric passenger elevator leading to the upper floors. The station floor is lighted throughout by electric glower lamps, placed in the ceiling and around the columns. Five double doors from the main room lead to iron fenced inclosures leading to the tracks outside, so as to control traffic to and from the cars. All the doors are arranged so that traffic must pass to the right in every case, thus avoiding conflict of passengers. The station room is very handsomely finished; the woodwork is of quarter-sawed oak, highly polished, and the metal work is of brush brass finish on bronze metal. In the basement are located the toilet rooms.

On the upper floors are the general offices of the company with its subsidiary companies. They are large and airy and finished in quarter-cut oak, except the board room on the corner, which is finished in mahogany and commands a fine view up King St.

The entire wiring for the building is laid in conduit and is on the 3-wire system with 8-ampere outlets (1,000 circular-mils for each ampere). The main distributing panel, located on the station floor, and the sub-panels on the upper floors are all controlled by main cut-out switches in the motor generator room in the basement. The entire wiring of the building is made especially heavy in order to provide for any future electrical development. The front of the station building is supplied with outlets for illuminating purposes so that when desired the entire front of the building may be covered with lights. The covered passageways at the right and the verandah in the rear are built of steel and copper, and are brilliantly lighted by nearly 1,000 incandescent lamps.

A battery of three boilers located under the tracks outside heat the station and office building, and also the Bennet Theatre, which is shown in one of the accompanying illustrations in the rear to the right.

The new station will be used by the Hamilton Radial Electric Ry., the Hamilton & Dundas Street Ry., the Brantford & Hamilton Electric Ry., and the Hamilton, Grimsby & Beamsville Electric Ry.



HAMILTON TERMINAL CO'S STATION—GROUND PLAN OF TRACK LAYOUT.

THE HAMILTON TERMINAL CO.'S STATION, HAMILTON, ONT.

Grain Elevator Notes.

The elevator heretofore owned by A. A. Wright at Kingston, Ont., has been purchased by the Renfrew Roller Mills Co.

The grain elevator at Caledonia, Ont., was destroyed by fire, Nov. 13, at the same time as the G.T.R. station was burned.

The name of the Imperial Elevator Co., Winnipeg, has been changed to that of the Imperial Elevator and Lumber Co., by order-in-council.

D. J. Murphy, for six years foreman of the Great Northern elevator at Quebec, accidentally shot himself while cleaning a revolver, Nov. 11.

The capital of the Zenith Grain Co., Ltd., has been increased from $25,000 to $50,000, by supplementary letters patent under the seal of the Secretary of State of Canada.

The partnership of R. Murray, A. M. Lyle, A. E. Venton, and G. R. White, carrying on business at Lyleton, Man., under the name of the Lyleton Elevator Co., has been dissolved as far as regards G. R. White.

The Chicago and Northwestern Granaries Co., Ltd., organized in London, Eng., in 1889, and owning a number of elevators in Minnesota, and North and South Dakota, has sold the whole of its interests therein to the Van Dusen-Harrington Co., of Minneapolis, Minn.

The Great Northern elevator at Superior, Wis., was recently destroyed by fire, together with 700,000 bush. of grain, three flour mills, 40 houses, two tugs, two scows, and a derrick. The cause of the fire has not been discovered. The damage done is estimated at $3 000,000.

The elevators at Port Arthur have been working to their full capacity recently, dealing with about 400 carloads a day. To cope with the accumulation of grain there, nine locomotives are working during the day and four at night, switching the cars to and from the elevator tracks.

The Goderich Elevator and Transit Co. will be able to deliver wheat to the C.P.R. cars on the Guelph and Goderich Ry., by means of a conveyer spout crossing the G.T.R. tracks. The application for permission to carry this spout across the G.T.R. tracks was made to the Board of Railway Commissioners Oct. 30.

It is stated that the Montreal Transportation Co. has transhipped over 11,000,000 bushels of grain so far this season. This is said to be the largest quantity passing through the Montreal elevator in one season. It is estimated that at least a further 2,000,000 bushels will be dealt with there before the season closes.

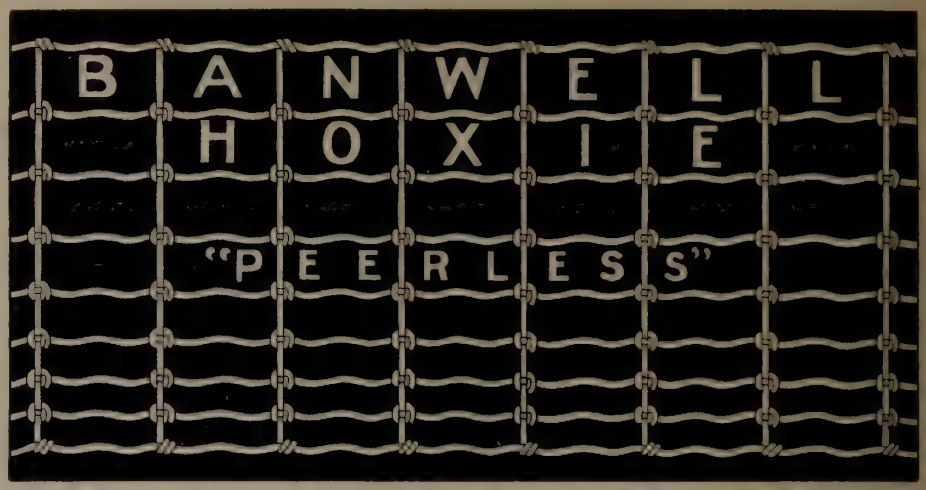
McLaughlin and Ellis, Ltd., has been incorporated with a capital of $100,000 and office at Winnipeg, for the purposes of constructing, acquiring, operating, hiring, leasing, selling, or otherwise disposing of elevators, for elevating wheat, grain or other produce, with the requisite docks, wharves, sheds and warehouses for the reception and storage of such grain, and generally to carry on an elevator and storage business, and for other purposes.

A deputation of members of the Manitoba Grain Growers' Association had a conference at Winnipeg, Nov. 8, with the Federal representatives of the Province, to discuss several recommendations which the Association are making respecting the grain trade. Amongst them are the questions of Government-owned elevators at lake terminals, transportation and tariff, regulations of elevators and railways, and legislation to prevent discrimination in charges by the elevator companies.

Regarding the establishment of elevators at Vancouver, B.C., W. Whyte, Second Vice-President, C.P.R., while in that city recently, said: "It is the intention of the company to reserve sites for grain elevators on the Vancouver waterfront. This idea is being kept in view in the yard improvements now being carried out, as it is impossible to tell what effect the building of the Panama canal may have on the export movement of wheat from the prairie provinces. One result may be that a very large percentage of the grain may seek an outlet via Vancouver instead of reaching the Liverpool markets via the St. Lawrence river route. Under these circumstances we have felt justified in making provision for future contingencies. If the grain from a big area of the Canadian west can be hauled here and loaded on steamers, making the passage of the Panama canal and landing it in Liverpool, only one transhipment being involved, as compared with elevator charges for transhipment at Fort William and Montreal—I say if this can be done more cheaply via Vancouver, then the business is bound to come this way."

The G.T.R. Co.'s appeal against the decision of the Board of Railway Commissioners in what is known as the penny-a-mile fare case, was argued before the Supreme Court at Ottawa, Oct. 29. Judgment was reserved.

The Imperial Service Medal has been granted to the following: Jas. Bradley, lockmaster, Welland canal; D. Hunter, lightkeeper, Port Dalhousie, Ont.; M. H. Johnstone, lockmaster, Rideau Canal; W. McG. Lambert, lightkeeper, Chantry Island, Ont.; J. G. Martin, lightkeeper, Little Metis, Que.; J. G. Newman, lockmaster, Rideau Canal; W. Newman, lockmaster, Rideau Canal; C. Sampson, lightkeeper, Ouetique Island, N.S.



PEERLESS WOVEN WIRE FENCING

Made from uniformly heavy hard steel wire, well galvanized.
Made in large rolls ready to stretch up.
Requires but few posts; costs very little to erect.
Conforms perfectly to any surface, no matter how rough.
Reduces the cost of fence maintenance to a minimum.

BANWELL HOXIE WIRE FENCE COMPANY LIMITED
HAMILTON, ONTARIO

C.P.R. LANDS

THE CANADIAN PACIFIC RAILWAY COMPANY have 10,000,000 acres of selected lands for sale in Manitoba, Saskatchewan and Alberta.

Map No. 1—Winnipeg to Second Meridian	$ 8.00 to $15.00 per acre.
Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians	10.00 to 25.00 per acre.
Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian(generally)	8.00 " "
Map No. 5—Calgary District	8.00 to 10.00 per acre.
Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—Range 11 West, 4th Meridian to Range 7, West 5th Meridian	10.00 to 25.00 per acre.
Map No. 7—Part of Western Saskatchewan and Eastern Alberta, 3rd Meridian to Range 10 West, 4th Meridian	10.00 to 25.00 per acre.

Maps showing these lands in detail will be sent free on application.
All prices are subject to change without notice.

TERMS OF PAYMENT

An actual settler may purchase not more than 640 acres on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal, with interest, in nine equal instalments annually thereafter, as shown in the following table:

160 Acres at	$ 8.00 per acre,	cash payment	$191.70	first year's interest	$65.28	and nine instalments of	$160.00
" "	9.00	"	215.70	" "	73.36	" "	180.00
" "	10.00	"	239.70	" "	81.62	" "	200.00
" "	11.00	"	263.60	" "	89.78	" "	220.00
" "	12.00	"	287.60	" "	97.96	" "	240.00
" "	13.00	"	311.50	" "	106.10	" "	260.00
" "	14.00	"	335.60	" "	114.32	" "	280.00
" "	15.00	"	359.50	" "	122.44	" "	300.00

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

CANADA NORTH-WEST LAND CO.

This Company has 550,000 acres of selected lands in Manitoba and Assiniboia which offer excellent opportunities to settlers and investors who desire to secure good lands in well-settled districts. These lands are on sale at the Company's Office at Winnipeg, and at the various land agencies of the Canadian Pacific Railway Company.

F. T. GRIFFIN, Land Commissioner, Winnipeg.

THE CANADIAN BRONZE COMPANY LIMITED

MONTREAL, P.Q.

High Grade Lead Lined Journal Bearings for all classes of Service.
Wearing Metal Castings for Locomotives.
Miscellaneous Brass Castings for Railroads.

WORKS AND OFFICE: 69 DELORIMIER AVE., MONTREAL, P.Q.

MARINE DEPARTMENT

Car Ferry Traffic on Lake Erie.

Winter navigation on Lake Erie between the coal shipping ports of Ohio and Canadian harbors, 60 miles across, has long been a problem. For more than a decade, Lake Erie car ferries have attempted to run uninterruptedly the year round, but time and again in late winter are overtaken by ice conditions which result in their being frozen in for weeks, sometimes a mile or more from shore. Nevertheless the car ferry traffic of this notable inland body of water is a success and is increasing. A new ferry, with novel features for ice battling, of which great things are expected, has recently been put into service, and it is reported that another large ferry is to be built. The navigation season for ore vessels on the lower lakes closes during the early part of December. After this time business at the docks is suspended except for the loading of ore from stock piles into railway cars bound for the furnace districts, and the loading of coal, steel, and other freight to the car ferries. There is a constant demand for U.S. coal on the Canadian side, and, as to the supply, it is more plentiful in winter for these routes than in summer, when large numbers of vessels are waiting for cargoes for the Upper Lakes. One of the car ferry routes on Lake Erie extends from Port Dover, Ont., to Conneaut, Ohio. Other Canadian ports which are reached from Conneaut are Port Stanley and Rondeau. The latest route on Lake Erie is one which has been inaugurated during the past year between Ashtabula, the world's greatest ore receiving port, and Port Burwell, Ont. Any of these routes compares favorably in length with the notable ones of Lake Baikal, which connect with the Trans-Siberian Railway.

The first two ferries introduced on Lake Erie were each 300 feet long, 54 ft. beam, 60 ft. high from keel to deck, and equipped as 3,500 h.p. ice crushers. The number of cars which could be placed aboard was from 26 to 30, depending on the size of the cars. The ice crusher, located at the bow and shaped something like a spoon, climbs up on to the ice in its path and crushes it down. In 1904 another type of ferry—the Marquette & Bessemer No. 1—was placed on a coal route between Conneaut and Rondeau. This boat is not a car ferry in the strict sense of the word, since, while the cars are run aboard via two tracks, they are not carried across the lake but discharge their contents from hopper bottoms into a continuous hatch over which the tracks are suspended. Ten cars at one time can be unloaded in this manner. The capacity of the hold is 2,500 tons. At the Canadian terminal four grappler unloaders remove the cargo in eight hours. The time of unloading, of course, is much longer than that of a ferry which carries the loaded cars, but the load carried is several times as great and the time of loading is but little more than that of the regular car ferries. The length of this vessel is 255 ft., depth 22 ft., beam 43 ft.

The new car ferry Ashtabula is notable especially for her water bottom, which is so controlled that she can free herself from the ice in several different ways, dependent upon the kinds of ice with which she has to battle, or other conditions. There are eight transverse bulkheads, six of which run to the car or main deck and two to the lower deck. The water in the compartments is controlled by ballast pumps. Simultaneously one pump may be pumping the water out of one compartment and another pumping into another compartment. By filling the tanks aft and pumping out the ones forward, the ferry's bow is made to climb up on to a field of ice and crush it down in its path. To plow directly into a field of ice, when travelling light, the vessel is lowered to the desired depth by filling all the water compartments. Again, in freeing herself from ice, it may be deemed best to list the ferry to one side. This is accomplished by filling the tanks on one side of the ferry and pumping out those on the other. This ferry is 50 ft. longer than the ones on the Conneaut-Port Dover line, heretofore referred to, and has a 56 ft. beam. Her keel is 330 ft., her depth 20 ft. She is propelled by twin screws, driven by two triple-expansion engines with cylinders 19½, 31 and 52 ins. in diameter by 36 in. stroke supplied with steam from four Scotch boilers. On board the Ashtabula there are four tracks, which will accommodate thirty 50-ton cars coupled together and then fastened to bumper posts. New cars have been built especially for this ferry traffic. They are each 38 ft. long. In the cabin amidships are the galley and the eating quarters of the ferry. The dining-room for officers and guests is elaborately furnished. There are also baths, lavatories, and all modern conveniences. Even the quarters of the deck hands are equipped for comfort. The vessel is lighted by electricity and, when in port, is connected with the telephone service. The ferry can make two trips a day between Ashtabula and Port Burwell. Her actual running time for the round trip on her official test was 9 hours and 25 minutes. Going to Port Burwell with a full load of 30 cars of coal, and with the lake quite rough, she made a little more than 15 miles an hour, and returning averaged 15¼ miles an hour.

The method of loading and unloading a car ferry calls for an apron which can be raised and lowered, and which is equipped with tracks which will connect the tracks of the docks with those on board the ferry. This apron hangs from powerful balance arms, from the opposite ends of which are counterweights aggregating 40 tons. This lift is controlled by electric machinery. With the touch of a lever, the outer end of the apron can be raised or lowered to the level of the vessel's dock, the inner end working on rockers. The apron at the Ashtabula car ferry dock weighs 75 tons, and is 30 by 52 ft. in size. There are usually four tracks on the dock, four on the ferry, and two on the apron. The cars go to and from their respective tracks by switching. Two of the tracks in the car ferry yards are kept for empty cars and two for loaded cars. The switching of loaded cars aboard and empty cars to shore may progress at the same time. At the Canadian terminals, when switched to the docks, the cars are picked up by the Canadian railways and distributed to distant destinations for unloading.

Lake Erie car ferries in starting out upon a one-day trip, in Jan. and Feb. especially, take with them a stock of provisions sufficient for at least three weeks. This is to provide for an emergency in case the ferry is frozen in on the route. When frozen in, members of the crews often walk to and from the mainland over the fields of ice. The wind has a great deal to do with the ice conditions, often piling the ice up mountains high in the ferries' path. In such cases, if an opening can be found in the windrows, the ferry may break through. Otherwise, dynamiting is sometimes done with good effect.

Atlantic and Pacific Ocean Marine.

The Dominion Line steamship Kensington sailed on her last voyage from Montreal for the season Nov. 9.

J. Allan, of the Allan Steamship Line, was a candidate on the Socialist platform at the recent municipal elections in Glasgow, Scotland.

C. H. Wilson, Baron Nunburnholme, head of Thos. Wilson, Sons & Co., Hull, Eng., owners of the Wilson Steamship Line, died Oct. 27, aged 74.

Dr. A. A. Wilson, Montreal, has been appointed surgeon of the C.P.R. steamship Empress of Ireland, succeeding Dr. G. G. Winder, resigned.

The Union Line steamship Taviuni, on the New Zealand route, recently reported a seismic disturbance at sea lasting about twenty seconds, while on the way to Suva.

The British steamship Queen Christina, in ballast from San Francisco, Cal., to Portland, Ore., struck on the North Seal rock, off California, recently, and is considered a total loss.

The C.P.R. Atlantic Steamship Department entertained the Dominion immigration officials at Quebec to a trip to Montreal by train, returning by the S.S. Lake Manitoba, Oct. 26.

The Dominion Line steamship Dominion arrived in Montreal Oct. 30, on her last trip to that port for the season. She took thirteen days to make the voyage from Liverpool, on account of the severe weather.

Dr. G. G. Winder was presented with an address and a purse of gold by the passengers on the S.S. Empress of Ireland recently, on his retiring from the C.P.R. service to take up private practice in British Columbia.

The C.P.R. steamship Lake Manitoba, and the Dominion Line steamship Ottawa, sailed from Montreal, Oct. 26, for the last time this season. A large number of people assembled at the pier to bid good-bye to the respective captains.

Capt. Dunlop, who was a few years ago in command of the Allan Line steamship Pretorian, has been transferred to the Corinthian, in place of Capt. Lindsay, who, it is reported, will fill a responsible position on shore, on this side, for the same company.

The Allan Line steamship Mongolian and the Thomson Line steamship Hurona, both of which were damaged in collision in the Straits of Belle Isle recently, have arrived in Great Britain, and will each undergo thorough repairs on the Clyde and Tyne, respectively.

The Donaldson Line steamship Alcides, with a cargo of coal and steel for the I.C.R. buildings at Moncton, N.B., arrived at St. John, N.B., Nov. 5, much overdue. Considerable anxiety had been felt for the safety of the vessel, on account of the rough weather.

It is understood that though the C.P.R. has not yet placed an order for the construction of the two vessels, which it was authorized to do at its recent annual meeting, negotiations are in progress with the Fairfield Shipbuilding Co., Glasgow, Scotland, with that end in view.

The winter schedules for the Allan and C.P.R. steamships on the Atlantic have gone into force. The boats will call at Halifax to drop the mails, and take on customs and immigration officials for the examination of baggage and passengers en route to St. John, similar to last winter.

It is reported that a steamship line is projected between England, Bermuda, Boston, and St. John, N.B. The prime mover in the proposal is stated to be Capt. Golin-

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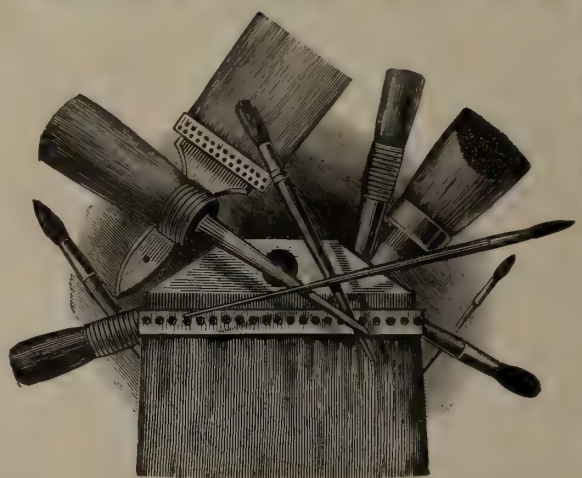

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RED STAR LINE
New York—Antwerp—London—Paris
Sailing from New York Wednesdays.

WHITE STAR LINE
New York—Liverpool—Queenstown—
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N.Y.—Plymouth—Cherbourg—Southampton
Sailing from New York Wednesdays.
Boston—Queenstown—Liverpool
Sailing from Boston alternate Wednesdays.

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sky, who arrived in St. John recently from Bermuda, en route to England, where it is proposed to finance the scheme.

The Allan Line steamship Bavarian, which was wrecked on Wye rock in the St. Lawrence two years ago, and subsequently sold by the underwriters to a U.S. wrecking company, has been resold by the latter, and is to be dismantled and scrapped. The price paid for her is stated to be $65,000.

The Dominion Line steamship Canada, which was scheduled to sail from Liverpool Nov. 21, was taken off the route and docked for a general overhauling. Her place was taken by the Dominion, the Kensington replacing the Dominion. It is expected that the Canada will be ready to sail from Liverpool Dec. 21.

The Thomson Line steamship Escalona, which arrived at Quebec Nov. 1, reported exceedingly rough weather. Almost from the time she left North Shields, Eng., Oct. 12, she encountered high seas, and in mid-ocean during the height of a storm, a ship's carpenter was washed overboard and lost, and one of the firemen severely injured.

W. I. Gear, Managing Director of the Robert Reford Co., agents for the Thomson Steamship Line, is at present in Great Britain. It is presumed that his visit is in connection with the inquiry into the collision between the Allan Line steamship Mongolian and the Thomson Line steamship Hurona, which is being held at Glasgow, Scotland.

The Nord Deutscher Lloyd steamship Kaiser Wilhelm der Grosse, which sailed from New York Oct. 25, lost her rudder off Newfoundland, but continued her voyage, steering by her screws alone. She arrived in Plymouth safely, one day late. The captain has been decorated with the third-class Order of the Crown by the Emperor of Germany.

Capt. Lindsay, formerly in command of the Allan Line steamship Corinthian, has been appointed shore captain for that company in place of Captains Griffiths and McGiffin, who have hitherto occupied the position jointly. Capt. Lindsay took up the work of winding up the summer season at Montreal before proceeding to St. John, N.B., where he is stationed for the winter.

The C.P.R. steamship Montreal, which recently grounded in Lake St. Peter, near Sorel, Que., was released Nov. 2, and proceeded to Montreal under her own steam. As far as can be ascertained very little damage was done, but if after arriving in England it is found that she has been more seriously damaged than at present is believed, she will be dry-docked and repaired there.

The St. John, N.B., City Council has received a communication from W. Downie, General Superintendent C.P.R., and W. Thomson & Co., agents for the Allan Steamship Line, stating that a working agreement had been arrived at regarding the supply of grain to the Allan vessels at berth 5. It is stated that the C.P.R. will supply grain at berths 2 or 3 to the Allan vessels, as berth 5 has not yet been equipped with grain conveyors.

Sir Thos. G. Shaughnessy stated recently that no decision had been arrived at as to the transfer of the C.P.R. steamships Empress of Britain and Empress of Ireland to the Pacific ocean service. There was a possibility of building two other vessels for that service, if it was decided not to transfer them, and it was almost an assured fact that two more boats would be built, but whether they would be placed on the Pacific or the Atlantic route had not been decided.

The recent sinking of the C.P.R. steamship Empress of China at her slip at Victoria, B.C., and the subsequent delay in pumping her out, has called attention to the lack of facilities in the harbor for dealing with accidents of this description, and those arising from fire. The attention of the city and Dominion authorities has been directed to the need for such facilities as the importance of the harbor demands, and it is stated that the provision of a fireboat may be made in the near future.

The lighthouse recently erected on the Fastnet rock, on the south-east coast of Ireland, is supplied with the latest pattern of lantern of the dioptric type, with a series of incandescent burners giving 1,200 candle power, increased by lenses to about 750,000 c.p., giving a flash of three-twenty-fifths of a second every five seconds. The granite stones, numbering 2,074, used in construction weighed 4,300 tons, and the entrance door to the tower is 57 ft. 9 in. above high water mark. The cost of the lighthouse is said to have been £84,000.

Notwithstanding official denials that any negotiations are in progress for an arrangement between the G.T.R. and the Cunard Steamship Line for the handling of passenger and freight traffic between England and Australia and the Orient via Canada, reports are being circulated in London and Liverpool, Eng., to that effect. It is stated that possibly the Allan Line and the Cunard Line will co-operate, one supplying the Atlantic and the other the Pacific service. C. M. Hays, Second Vice-President and General Manager, and H. H. Norman, secretary G.T.R., have stated that they have heard nothing of the negotiations referred to.

Capt. Braes, of the Allan Line steamship Tunisian, brought that vessel into Montreal for the last time, Oct. 26. On the arrival at Liverpool he will give up command and retire from active service, after having spent fifty-one years at sea, forty-one of them being as a commander. He has commanded, successively, the Star of India, Oceanica, Bruce, State of Pennsylvania, State of Nebraska, State of California, Mongolian, Parisian and Tunisian, and has made 596 voyages. The following "limerick" dedicated to the captain, enlarging on one of his peculiarities, was perpetrated by a well-known professor in a recent voyage:

There was a gay captain called Braes,
Who had most remarkable ways;
He'd stay out from dinner,
Yet never get thinner—
Though absent for several days.

Maritime Provinces and Newfoundland.

The schooner Lady Effie, 36 tons, was reported lost at Kettle Cove, Nfld., recently.

The barque Guldregn, 640 tons register, built in Norway in 1879, was offered for sale by tender recently, at North Sydney, N.S.

The St. John, N.B., civic Board of Works recommend that tenders be asked for the construction of two additional steamship berths.

The schooner Olivetta was driven ashore at Bay de Verde, Nfld., recently in a gale and became a total wreck. The crew were saved.

The Government steam tender Montcalm is engaged in the removal of the Marconi apparatus and operators from the Labrador coast for the winter.

The S.S. Hercules, owned by Tapley Bros., St. John, N.B., struck a submerged rock while entering St. John harbor recently, and broke her rudder stock. No other damage was sustained.

It is feared that the schooner Orion has been lost off Newfoundland, together with her crew of 16 men. She belonged to Grand Bank, and beyond a dory bearing her name, no trace has been found.

The barque Hillside, built at Grangemouth, Scotland, in 1897, has been sold at Yarmouth, N.S., to a U.S. firm. Her dimensions, etc., are: length, 158 ft.; breadth, 33.1 ft.; depth, 13.1 ft.; 439 tons.

T. McRae, first officer of the Charlottetown Steam Navigation Co.'s steamship Empress, died suddenly while on board recently, aged 67. He had been in the company's service for 15 years.

The schooner Gevestar, of Murray Harbor, P.E.I., which left North Sydney about Oct. 30, and had not been reported several days after she was due at Murray Harbor, is stated to have been lost with her crew.

The Dominion Department of Marine has supplied a lifeboat for Prince Edward Island, and will also provide three fully equipped life saving stations. It is hoped to have all completed before the close of navigation.

The Plant Line S.S. Halifax is being overhauled at Halifax, N.S., having been taken off the Boston-Charlottetown route for the season. She will leave early in Dec. to take up her winter service between Key West and Havana.

The schooner May Flower ran ashore in Orwell Bay recently, and is regarded as a total wreck. She was built at Summerside, P.E.I., in 1890, her dimensions being: length, 61.5 ft.; breadth, 21.6 ft.; depth, 8 ft., and 60 tons register.

The Charlottetown, P.E.I., schooner Parthenia was totally wrecked at Liverpool harbor entrance, Nov. 7. She was built at Lunenburg, N.S., in 1882, her dimensions being: length, 79.8 ft.; breadth, 24 ft.; depth, 9.6 ft.; tonnage, 99 registered.

J. F. Morse, of the Eastern Steamship Co., stated recently that he knew nothing of the rumored establishment of a line of boats on the St. John River by his company, but considered that there was an opportunity for development in that direction.

The Italian barque Affezione, bound from Weymouth, N.S., to Buenos Ayres with lumber, put in at Halifax, Nov. 10, with masts, sails and deck cargo gone, and in a leaky condition, as a result of being battered about in a storm off Cape Sable.

The schooner Loyal recently wrecked off Rexton, N.B., has been surveyed and declared a total wreck. She was built at Mahone Bay, N.S., in 1900, her dimensions being: length, 94.5 ft,; breadth, 25 ft.; depth, 9.6 ft., and 99 tons register.

The Lurcher lightship, which has recently been thoroughly overhauled, and was only replaced in her position on Lurcher shoal, Yarmouth, N.S., at the end of Oct., broke from her moorings during a storm, Nov. 7, and was for several days out of service.

The schooner Tartar, bound from Sydney, N.S., to Richibucto, N.B., struck the harbor bar at the latter place, Nov. 7, and later fell off and sank in deep water. She was built at La Have, N.S., in 1892, her dimensions being: length, 65.7 ft.; breadth, 21.4 ft.; depth, 8.5 ft., and 61 tons register.

The Swedish steamship Oscar II, chartered by the Nova Scotia Steel Co., which went ashore on Flint Island some four months ago, is again in service, after repairs. This is one of the vessels which had to be removed to New York for completion of repairs, owing to a strike at the Halifax dry dock.

The Halifax and Canso Steamship Co., operating the steamboat Scotia in the coasting trade, is a local company, with G. S. Campbell and Co., Halifax, as agents, managers and part owners. The officers are: President, A. M. Bell; Vice-President, G. S. Campbell; Secretary-Treasurer, W. T. Davidson.

The schooner Hattie D., which went ashore recently, has been floated and placed on the marine railway at Yarmouth, N.S., where it was found that her keel and rudder were gone, and her stern post and stem broken.

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The paddle steamboat Springfield, owned by the Springfield Steamship Co., Ltd., Springfield, N.B., was destroyed by fire at Hatfield's Point, N.B., Nov. 5. She was built at Woodstock, N.B., in 1882, her dimensions being: length, 111 ft.; width, 17.4 ft.; depth, 3.8 ft.; tonnage, 233 gross, 147 net, with engine of 26 h.p.

The Newfoundland schooner Hispanola was seized at North Sydney, N.S., Nov. 8, and her captain charged with a violation of the customs laws in not entering and clearing his vessel at Georgetown last May. Capt. Kennedy pleaded that he was unable to conform to the law owing to ice conditions and the negligence of the customs officials at the port.

The New Brunswick Government has renewed the licenses of the following foreign corporations, to enable them to do business in the province for one year from Nov. 1: The Robert Reford Co., Halifax, N.S.; The Eastern Steamship Co., Portland, Me.; The Dominion Coal Co., Ltd., Montreal; The Dominion Atlantic Ry. Co., London, Eng.; The C. Robin-Collas Co., Halifax, N.S.

The first steamship to dock at Amherst, N.S., entered the harbor Nov. 4. This was the Donald Line steamship Alice, with a cargo of oak for Rhodes, Curry & Co., from Virginia. The boat was gaily decorated and the captain of the vessel expressed his satisfaction with the accommodation. Other vessels are expected shortly, and a second pier, 364 ft. long, is being constructed to provide facilities for handling the increased traffic.

The management of the Consolidated Steamship Lines Co., of which the Eastern Steamship Co., owning vessels calling at St. John, N.B., forms a part, has recently undergone a complete change. The control of the Eastern Steamship Co., and another, has been vested in Calvin Austin, formerly president of the Consolidated Co., and who has been succeeded by C. M. Englis. A cashier has been appointed for each of the subsidiary companies, who will be responsible for the funds.

The Campobello Corporation has been incorporated under the New Brunswick Companies Act, with a capital of $25,000 and offices at Campobello, N.B., for the purpose of developing the island of that name. The company is empowered, among other things, to carry on a general navigation business, and to purchase, charter or construct steam and other vessels. The provisional directors are: H. M. Merriman, Campobello, N.B.; T. Askenasy, New Rochelle, N.Y.; A. Buchanan, P. Armitage, A. Douglas, New York City.

The Government surveying schooner Ellinor has been placed in winter quarters at Halifax. Her sounding apparatus and gear will be thoroughly overhauled during the winter. The Ellinor replaced the Gulnare on survey work on the Newfoundland, Labrador and Gulf shores two years ago, prior to which she had a rather adventurous career. Originally built in England for the Prince of Monaco, she was sold by him to a German who, it is presumed, fell a victim to cannibalism on the west coast of Africa; the crew who were left in charge of the vessel took her to sea, and subsequently quarrelled and abandoned her, taking to the boats. The derelict vessel was sighted by an Italian ship and towed to Genoa, and as no claimant turned up, she was sold to an Englishman, who passed her on to the British Government, when she was placed in the present survey.

Hon. R. F. Sutherland, Speaker of the Dominion House of Commons, was a guest of the Knife and Fork Club, Kansas, Mo., recently, and on the subject of a proposed 21 ft. channel from the Great Lakes, said: "People now alive may live to see the minimum depth made 21 ft., and when that day arrives, Montreal, Quebec, Halifax, and St. John, and perhaps some quiet harbor that is as yet only dreamed of, will be the busiest ports of the North American continent. Of this great highway Canada holds the door. It is a great asset, and more than anything else gives Canada a dominating position on this continent. This will be more manifest in the future than it has been in the past. New York State is about to spend $100,000,000 in deepening the Erie canal to 12 ft. Even then it would be 2 ft. shallower than the waterway it is intended to rival, and while in the one a vessel will be almost in straightened waters, in the other, with the exception of a few places, a ship will have ample room for full steam ahead. And as I have said, Canadians are looking forward to the 21 ft. channel of the future."

LIST OF STEAM VESSELS REGISTERED IN CANADA FROM OCT. 15, 1907, TO NOV. 15.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Alpha	122,603	Hamilton, Ont., 1906	Screw 1 N.H.P.	23.0	6.3	3.8	2	2	Kenora, Ont	J. A. Johnston, Ignace, Ont.
Annie F	122,534	Steveston, B.C., 1907	" 1 "	30.8	9.0	3.3	12	8	Vancouver, B.C.	W. H. Fortier, Vancouver, B.C.
Beta	122,604	Hamilton, Ont., 1906	" 1 "	23.0	6.3	3.8	2	2	Kenora, Ont	J. A. Johnston, Ignace, Ont.
Cabot	125,988	Grangemouth, Scot., 1907	" 63 "	155.1	25.1	9.7	465	162	Montreal	Steamship Cabot Co., Ltd., Sydney, N.S.
Canadian	122,533	N. Westminster, B.C., 1907	" 12 "	62.7	14.2	8.8	64	44	Vancouver, B.C.	R. McNair & H. Wilbar, Vancouver, B.C.
Cherokee	125,973	Toronto, 1907	" 41 "	120.0	23.0	7.3	328	160	Toronto	Muskoka Lakes Nav. & Hotel Co., Ltd., Toronto.
D. D. Mann	122,283	Shelburne, N.S., 1907	" 14 "	73.0	21.6	4.3	130	89	Shelburne, N.S.	Town of Lockeport Co., Lockeport, N.S.
Echo	122,536	Anacortis, Wash., U.S., '02	" 1½ "	31.5	9.3	3.6	12	8	Vancouver, B.C.	J. West, Nelson Island, B.C.
Ettie	122,194	Galiano Island, B.C., 1907	" 2½ "	32.0	9.4	3.3	9	6	N. Westminster, B.C.	A. J. Koloscoff, Eburne, B.C.
Gamma	122,605	Hamilton, Ont., 1906	" 1 "	23.0	6.3	3.8	2	2	Kenora, Ont	J. A. Johnston, Ignace, Ont.
Homespun	122,195	N. Westminster, B.C., 1907	" 18 "	46.0	10.0	4.5	17	10	N. Westminster, B.C.	F. S. de Grey, New Westminster, B.C.
Iroquois	125,986	Main City, Wis., U.S., 1892	" 73 "	257.1	41.0	24.4	1962	1276	Montreal	Montreal Trans. Co., Ltd., Montreal.
Jack Winton	122,293	Prince Albert, Sask., 1907	" 3 "	50.0	15.0	2.5	19	12	Prince Albert, Sask.	Prince Albert Lumber Co., Ltd., Prince Albert, Sask.
Loretta	122,480	Toronto, Ont., 1907	" 13½ "	77.3	17.0	7.7	75	31	Ottawa, Ont	Minister of Railways and Canals, Ottawa.
Lorna Doone	122,525	Vancouver, B.C., 1907	" 1 "	37.0	10.1	4.6	21	14	Vancouver, B.C.	W. Turner, Vancouver, B.C.
Marion	122,527	" " "	" 3 "	36.0	9.0	4.5	13	9	" "	Jervis Inlet Lumber Co., Ltd., Vancouver, B.C.
Ophir	122,531	" " "	" 16 "	91.4	24.0	8.2	212	139	" "	Burrard Steamship Co., Ltd., Vancouver, B.C.
Pikouagami	125,991	Roberval, Que., 1906	" 3 "	65.4	17.6	3.5	57	36	Quebec, Que.	Quebec & Lake St. John Ry. Co., Ltd., Quebec, Que.
Qu'Appelle	121,780	Port Hyman, Sask., 1907	" 10 "	62.0	17.0	4.0	82	51	Winnipeg, Man	W. Pearson Co., Ltd., Winnipeg, Man.
Sadie	122,088	Brae, P.E.I., 1907	" 18 "	30.5	9.8	4.5	9	5	Charlottetown, P.E.I.	J. & A. Hierlihy, Brae, P.E.I.
Samson	122,312	Shelburne, N.S., 1907	" 33 "	83.0	20.5	8.6	111	50	Lurenburg, N.S.	La Have St'mship Co., Ltd., LaHave, N.S.
Scotia	122,423	Mahone Bay, N.S., 1907	" 52 "	138.8	26.8	9.6	376	268	Halifax, N.S.	Halifax & Canso Steamship Co., Ltd. Halifax, N.S.
Sea Otter	122,526	Lund, B.C., 1907	" ½ "	33.7	9.5	4.4	13	9	Vancouver, B.C.	D. Stevenson, Valdez Island, B.C.
Shamrock	122,532	Vancouver, B.C., 1907	" 1 "	35.7	10.0	4.0	16	11	" "	J. W. Weart, Vancouver, B.C.
Skate	122,530	Ballard, Wash., U.S., 1907	" 2 "	33.0	11.0	3.6	13	9	" "	W. Robinson, Vancouver, B.C.
Tillicum	122,535	Port Simpson, B.C., 1906	" ½ "	42.3	8.1	4.0	13	9	" "	W. T. Kergin, Port Simpson, B.C.

LIST OF SAILING-VESSELS AND BARGES REGISTERED IN CANADA FROM OCT. 15, 1907, TO NOV. 15.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Ab. L. Andrews	122,637	Toledo, Ohio, U.S., 1873	Schr.	138.7	26.1	11.1	312	287	Kingston, Ont.	Pittsburg & Erie Coal Co., Ltd., Toronto.
B II	122,529	Vancouver, B.C., 1907	Scow	73.9	30.0	8.0	158	158	Vancouver, B.C.	Bermuda Steamship Co., Ltd., Vancouver.
Ed. Hall No. 1	116,957	Bay City, U.S., 1896	Dred.	79.0	30.0	7.0	301	246	Sarnia, Ont	Sarnia Bay Lumber, Timber, and Salt Co., Ltd., Sarnia, Ont.
Ella May	122,424	Allendale, N.S., 1907	Schr.	69.9	19.0	8.7	57	57	Halifax, N.S.	A. Hubley, Hacketts Cove, N.S.
Francis	122,285	Shelburne, N.S., 1907	"	76.5	20.5	8.6	73	68	Shelburne, N.S.	W. Gesner, Belle Isle, N.S.
Grattan	122,490	Ste. Irenée, Que., 1907	Barge	121.6	32.0	7.7	250	250	Quebec, Que.	J. C. Kaine, Quebec, Que.
Iolanthe	122,592	Davensport, Mass., U.S., '83	Schr.	45.3	14.3	5.6	18	18	St. Andrews, N.B.	S. Brown, Campobello, N.B.
Rachel	122,294	Prince Albert, Sask., 1905	Dred.	108.0	28.0	4.5	145	145	Pr. Albert, Sask.	Internat'l Gold Dredging Co., Ltd., Ottawa.
Rainbow	122,528	Campbell Isl., B.C., 1906	Schr.	51.6	16.2	6.2	41	41	Vancouver, B.C.	F. S. Carpenter, Campbell Island, B.C.
Rosa Georgina	122,576	Suretts Island, N.S., 1907	"	46.0	17.4	8.6	35	35	Yarmouth, N.S.	T. Jacquard, Comeaux Hill, N.S.
Roseway	122,284	Shelburne, N.S., 1907	"	120.0	28.4	12.4	291	244	Shelburne, N.S.	G. A. Cox, Shelburne, N.S.

Province of Quebec Marine.

N. Rosa, one of the first shipbuilders in the province, died at Quebec, Nov. 3, aged 87.

A steel lighthouse is being erected on the breakwater at Quebec, replacing the wooden one in use there.

By the burning of a tugboat at Murray Bay, Nov. 2, two boys who were sleeping on board were burnt to death.

The steam tugboat Michael Davitt, owned in Welland, Ont., was reported to have been wrecked at Batiscan, Que., in a storm on Nov. 9.

Information has been received by the Department of Marine, that the lighthouse at Portneuf, Que., was completely destroyed in a recent storm.

J. McDonald, in the employ of the Richelieu and Ontario Navigation Co., in connection with its Saguenay pleasure service, died suddenly at Montreal, Nov. 6, aged 60.

The Dominion Department of Marine has approved of the purchase by the Montreal Harbor Commissioners of three locomotives, for operating the harbor terminals, at a cost of $42,570, for delivery in April, 1908.

The barge Germaine broke from her moorings at Montreal, Nov. 7, and was swept two miles down stream and across the channel, where she lies partly submerged without however causing any obstruction to navigation.

The Montreal Harbor Commissioners recently announced that the upper stories of the first group of seven of the permanent sheds in the harbor were ready for the storage of cargo. This adds 350,000 sq. ft. to the space already available.

The telephone signal service on the St. Lawrence between Quebec and Montreal, recently completed, has been fully tested during the past month, and has been found to be of considerable practical use. It is intended to instal a station on similar lines on Crane Island.

Capt. Jones, formerly Dominion Steamship Line wharf superintendent at Portland, Me., has been appointed superintendent of the Dominion and Leyland Lines at Montreal, in place of the late M. H. Scanlan. Capt. Jones was at one time chief officer of the steamship Labrador.

The Montreal Harbor Commissioners are forwarding to the Department of Marine plans, specifications and estimates for a modern floating crane for use in the harbor, and asking for the necessary authorization for the purchase of same, to be delivered ready for the opening of navigation in 1908.

As a result of the recent enquiry into the causes of the running down of the Donaldson Line steamship Cassandra by the U.S. steamboat John Lambert, D. T. Sullivan, master of the latter vessel, was fined $20 and costs, or in the alternative, one month's imprisonment, for a breach of navigation rules.

It was reported at Quebec, Nov. 9, that the schooner Lizzie Lindsay, owned by A. Nadeau, of Cascapedia, Que., had gone down with all hands in a storm in the St. Lawrence. She was built at Douglastown, Que., in 1884, her dimensions being: length, 74.1 ft.; breadth, 22.3 ft.; depth, 9.9 ft.; 91 tons.

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The misfortunes attendant on the recent voyage of the steamship Bermuda from Quebec to Green Bay, Wis., when she ran aground twice in the River St. Lawrence, appear to have affected the captain's mind. On the arrival of the vessel at the latter port he was found to have committed suicide in his cabin.

The C.P.R. recently made application to the Montreal Harbor Commissioners for the use of two sheds in the harbor, after the close of navigation of the St. Lawrence, for the storage and delivery of import freight arriving at St. John, N.B., and also for the use of tracks, as in former years, which was subsequently granted.

At a meeting of directors of the Richelieu and Ontario Navigation Co. held at Montreal, Nov. 7, a quarterly dividend of 1¼% was declared, and J. P. B. Casgrain and A. H. Sims were elected directors of the company. An advanced policy involving the construction of new vessels, and the renovation of some of the older ones, was announced.

The Richelieu and Ontario Navigation Co.'s steamboat Quebec, which was taken off its route and laid up at Sorel early in the season, has been taken to Quebec, where she will be placed in the dry dock, and overhauled. Considerable alterations were made to this vessel some time ago, and it was found that she was rather top-heavy. This is to be rectified.

At a recent meeting of the Montreal Harbor Commissioners $175,000 was received from the Government Department of Marine, as an advance on loan, on account of expenditure on the new steel freight sheds, and a debenture was authorized to be signed and forwarded to the Finance Department in accordance with the by-law relating to such advances.

The steamboat Dominion, which had been running as a ferry below the Lachine rapids, was recently burned to the water's edge. She was a small paddle-wheeler formerly known as the Riviere du Loup, and was built at Sorel in 1873, her dimensions being: length, 104.8 ft.; breadth, 22.7 ft.; depth, 4.6 ft.; tonnage, 199 gross, 130 register; driven by engine of 19 h.p.

The revenue for Oct. of the Montreal harbor was $51,461; $31,000 from imports, $14,000 from exports, and $6,461 from local traffic; compared with $48,729 for Oct., 1906, of which $33,500 was derived from imports, $12,500 from exports, and $2,729 from local traffic. Since the opening of navigation the revenue has been $283,291, against $276,643 for the same period 1906.

M. H. Scanlan, who died at Montreal recently, had held the position of Superintendent for the Dominion, Liverpool and Bristol, and Leyland Lines at Montreal and at Boston and Portland, U.S., since the inauguration of the Dominion Steamship Line in 1872. He was born in Sligo, Ireland, and at 17 years of age entered the service of D. Torrance & Co., Montreal, who became agents for that company.

Following on the remarks recently made by Commander O. G. V. Spain in delivering judgment in the John Lambert-Cassandra case the captains, certified officers and master pilots engaged in the river and gulf of St. Lawrence have decided to form an association under the name of the National Association of Captains and Certificated Officers, to defend their interests against the encroachments of those who navigate the St. Lawrence without proper certificates.

The Quebec and Lake St. John Ry. has not, as reported, taken over the operation of the Lake St. John and Saguenay Navigation Co.'s vessels. That company has ceased operations for the present, and the Q. & L. St. J. Ry. has resumed possession of the light draught stern-wheel steamboat Pikouagami, which had been leased to the navigation company for the season. This boat was built by the Polson Iron Works, Toronto, especially to run up the shallow rivers which flow into Lake St. John. Other vessels of the Navigation Co.'s fleet are being operated as follows: Mistassini, by the Hotel Roberval; Roberval, by the Peribonka Pulp Co., and Marie Alma, by M. Dery, Quebec.

The Montreal Chamber of Commerce transportation committee is again calling attention to the desirability of establishing a dry dock at that port. Such construction has been more than once confirmed by the Dominion Government, and in 1898 an act granting $750,000 for this purpose was passed. The Harbor Commissioners at that time did a considerable amount of preliminary work, but no practical result has so far been achieved. The report to the Chamber of Commerce points out that the lack of such accommodation is prejudicial to the interests of the port, as any vessels sustaining any damage have merely to make temporary repairs until a port offering proper facilities can be reached.

Ontario and the Great Lakes.

J. Conlon, of J. & T. Conlon, Thorold, formerly owners of vessels trading on the lakes, died there Nov. 11, aged 75.

The contract for the construction of a dock at Port Colborne, Ont., has been awarded to Lastner and Porter, Wiarton, Ont.

The lifeboat for Cobourg, Ont., built under instructions from the Department of Marine, at Collingwood, has been completed and delivered.

A fire occurred on the schooner Dundee in Toronto harbor recently, caused by the overheating of a stove. The damage done was small.

R. E. Jamieson, Ottawa, has been appointed registrar of shipping and measuring surveyor for that port in place of the late R. C. W. McCuaig.

The steamboat City of Grand Rapids, owned at Wiarton, Ont., was destroyed by fire at Tobermory dock recently. She was built at Grand Haven, Mich., in 1879.

While manœuvring in the Port Stanley harbor, Nov. 6, the Government cruiser Vigilant collided with the tug Nettie B., and also did some damage to the dock.

The Pere Marquette Rd. is considering the advisability of putting on an additional car ferry to run between Port Stanley, Ont., and Conneaut, Ohio, in the coal trade.

The Montreal, Ottawa and Georgian Bay Canal Co. is to request an extension of time for the commencement of the work of construction on its proposed waterway from Montreal to Georgian Bay.

Tenders are under consideration by the Dominion Public Works Department for the construction of a wharf and approach at White Cloud Island, Georgian Bay, and also at Rossport, Thunder Bay

Capt. John Paul, who had been in the employ of the Dominion Government from 1881 to 1896, engaged in the removal of shoals in Kingston, Ont., harbor, died at Belleville, Ont., Nov. 6, aged 77

The Dominion Department of Marine has arranged to keep navigation on Lake Superior open until Dec. 10, and will pay the expense entailed by keeping the lighthouse at Passage Island, near Port Arthur, going till that date.

Tenders are under consideration of the Dominion Public Works Department for the construction of an extension to the breakwater, the removal of a portion of the landing pier, and other work at Meaford harbor, Ont.

The Farrar Transportation Co.'s steamboat Collingwood was successfully launched on the Georgian Bay Oct. 30, and left for Fort William for her maiden trip Nov. 9. She was fully described and illustrated in our May issue.

The new Government steamboat Bessie Butler left Peterborough Nov. 2, in charge of Capt. Morin, for her maiden trip on the Trent Valley Canal. She went as far as Nassau, and the trip was most successful from every point of view.

P. R. Hepburn & Co.'s steamboat Niagara, returning to Picton light through the Lachine canal, rammed the Wellington bridge recently, and did damage to the extent of $1,000. The vessel was allowed to proceed on the captain furnishing a bond sufficient to cover the damage.

Capt. Cleland's steamboat Mabel Bradshaw, on the route between Collingwood and Sault Ste. Marie, ran on a shoal near Twin islands, Shawanaga, recently, and tore a hole in her hull. She had a full cargo of freight, and about 20 passengers, who were transferred to the steamboat City of Meaford.

The Norwegian steamboat Pollux, under charter, was held at Port Dalhousie recently, on a claim for $4,000 damages. The vessel was chartered for the purpose of taking grain to Norway, but when partially loaded, it was discovered that the hold was covered with coal oil, and the owners refused to clean it.

The steamboat Norwalk, which collided with and sank the Montreal Transportation Co.'s barge Jet, recently, and was subsequently seized at Welland, Ont., was released Nov. 9, and proceeded to the Upper Lakes. The owners of the Jet have entered an action against the owners of the Norwalk, claiming $26,000 damages.

The enquiry into the causes of the wreck of the Ontario Government fisheries cruiser Lurline, off Goderich harbor, which occurred Oct. 27, is to be held by the Dominion Wreck Commissioners. The vessel struck on the sunken cribwork at the mouth of the harbor, of which the captain said he was unaware. The Lurline, which had recently been purchased from J. H. Walker, Walkerville, Ont., for $10,000, is a complete wreck.

A Goderich deputation waited on Hon. W. Pugsley, Dominion Minister of Public Works, recently, to urge the completion of the breakwater at the mouth of the harbor, and the addition of about 1,000 ft. thereto, to insure the safety of vessels in the harbor. The estimated cost will be about $200,000. The recent wreck of the Lurline on the submerged work was mentioned to show the dangerous state of the work as it is at present.

The Minister of Railways and Canals has transferred J. C. Boyd, Superintendent of the Canadian canal at Sault Ste. Marie, to the Williamsburg canal, with headquarters at Morrisburg; the superintendent at the latter place, J. Le B. Ross, C.E., being transferred to the Sault Ste. Marie canal. It was thought advisable to make the change in view of the friction which had arisen out of certain allegations regarding the administration of the Sault canal.

The Temiskaming Navigation Co., subsequent to a judgment against it recently on a claim for damage done to a small vessel in entering New Liskeard, has called the attention of the New Liskeard Board of Trade to the difficulty in entering caused by the blocking of the Wabi River with logs and small craft. The Board of Trade is to take the matter up, and has invited suggestions from the navigation company as to the method of procedure.

The following changes have been announced in the commands of the C.P.R. Upper Lake fleet, on account of the addition of the two new vessels, Assiniboia and Keewatin: Capt. L. Pyette of the Alberta is transferred to the Manitoba, Capt. E. B. Anderson being placed in command of the Assiniboia, with A. G. Cameron, formerly of the Alberta, as Chief Engineer. J. McIntyre, formerly first officer of the Alberta, has been appointed captain of that vessel. As it is improbable that either of the vessels will reach Owen Sound much before the close of navigation, further appointments will not as yet be made, but it is said that Capt. Pyette will take charge of the Keewatin, being succeeded on the Manitoba by Capt. F. X LaFrance.

The Canadian section of the International Waterways Commission met in Montreal Nov. 6, to discuss the proposed works at the Long Sault Rapids, near Cornwall, and at the foot of Lake Erie, by the St. Lawrence Power Co. It was stated that no works should be allowed in the St. Lawrence which could possibly affect navigation, and this view was strongly represented by H. A. Allan of the Allan Steamship Line, and Chairman of the Shipping Federation of Canada. The promoters of the scheme announced that the proposal to construct a dam at the foot of Lake Erie had been abandoned in favor of the construction of a dam across the Niagara River above the Falls, which would have the effect of increasing the depth of that lake.

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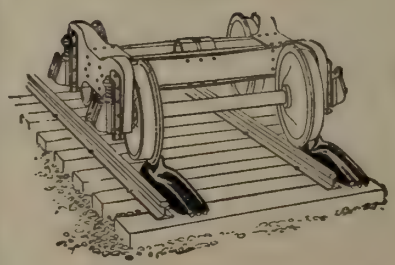

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Z. Mulhoit, government engineer, returned to Edmonton, Alta., recently, after a tour of inspection at the wing dams in course of construction at the Lesser Slave River rapids. The dams, of which there will be about 50, will extend a distance of 20 miles; 12 have already been completed, varying in length from 50 to 400 ft. The work has been in progress all summer, and it is intended to continue it as far into the winter as conditions will allow, and again early next year.

The navigators of the Red River and Lake Winnipeg state that by placing the swing pier of the Redwood bridge on the west side instead of the east, the channel for vessels will be on the wrong side of the river. When the St. Andrew's locks are completed, considerable transportation will be conducted from the lake to the city by water, and they claim that with the channel on the west side, it will be impossible to get cargoes through, and that navigation to the lake for large boats will be blocked. A watermen's association has been formed to deal with the matter and place their views before the Winnipeg Board of Trade.

The Dominion Government has decided to press on with the construction of the canal and locks between the St. Andrew's rapids and Winnipeg, and as far as possible arrange for the work to be carried on during the winter, allowing the contractors an additional $10,000, provided they complete the work in one year from April, 1908. The contract was let in May last to Quillan and Robertson, Montreal, and the work was practically commenced in July, since when considerable progress has been made. The total length of the canal will be 1,600 feet, with a depth of 37 feet, with a lock 290 ft. long, being 215 ft. from gate to gate, 45 feet wide, and with a drop of 21 feet. The walls are cement, 20 feet thick: at the gates reinforced cement has been used. The canal above the locks will be 50 ft. wide at the bottom and 100 ft. at the top. A dam of solid concrete, 800 ft. wide, with a steel superstructure, which can be raised or lowered as desired, is also being built across the river. The total cost of the work is estimated at $1,000,000.

B.C. and Pacific Coast Marine.

An application is to be made to the B.C. Chief Commissioner of Lands and Works for permission to remove obstructions from he Indian river, flowing into the north arm of Burrard Inlet.

A deep sea fishing company to engage in he cod fishing industry in the Behring sea and North Pacific is projected in Victoria, and it is stated that orders for four schooners have been placed at Lunenberg, N.S.

A report is current that a company is to be formed in Victoria to build or purchase a steamship and two schooners to engage in deep sea fishing off Queen Charlotte islands. The steamer will be equipped with cold storage, etc.

The Tidal and Current Survey section of the Department of Marine has issued tide tables for the Pacific coast for 1908, including those for the Fuca Strait, the Strait of Georgia, and the northern coast, and data for slack water in the navigable passes and narrows.

The British Columbia Marine Ry. Co.'s salvage plant consists of three steamboats with a modern equipment of pumps, cranes, etc., and highly trained salvage crews. The vessels are under steam at all times ready to proceed to the assistance of ships in distress.

The British Dominions Marine Insurance Co., Ltd., of London, England, has been licensed under the act respecting extra-provincial companies to carry out the objects of the company in the province of British Columbia, with W. D. Whitehead, Vancouver, B.C., as its attorney.

It is stated that the British Coast Steamship Co. is chartering a vessel to run between Victoria, Vancouver, and Mexico, calling at San Francisco, to commence next spring; this with the steamship transit now operated by the company will maintain a monthly service between the points named

The Watkins Logging and General Contract Co., Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $100,000, and with power amongst other things to charter, build or otherwise acquire steam and other vessels, and to operate same in connection with its business.

The Saanich Lumber Co., Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $100,000, with power amongst other things to maintain and operate docks, wharves, etc., and to build, purchase or otherwise acquire steam and other vessels, and to receive goods as wharfingers, warehousemen and carriers.

The whaling steamer St. Lawrence, 110 tons, has arrived at Victoria, having completed her season's work west of Vancouver island. She will shortly proceed to the east side, where she will be engaged during the winter. She had a very successful season, earning over $500,000, and bringing to port a cargo of more than usually exciting whaling yarns.

The Vancouver-Nanaimo Coal Mining Co., Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $250,000, to buy certain lands and coal mining rights in the province; to purchase, lease, or acquire by other means, wharves, docks and lands for same on the sea coast, lakes, bays, rivers or other waters, also to acquire, construct and operate steam and other vessels for the purposes of the company.

The Caledonia Trading Co., Ltd., has been incorporated under the British Columbia Companies Act, with a capital of $100,000, and offices at Victoria, to take over as a going concern the steamship Caledonia, owned by A. McDermott, and in addition to other things to purchase, hire, build or otherwise acquire steam and other vessels, and to carry on the businesses of merchants, carriers by land and water, wharfingers, barge owners, forwarding agents, etc.

The Western Canada Timber Co., Ltd., of London, Eng., has been licensed under the act respecting extra-provincial companies, to carry on its business in the province of British Columbia. Amongst other things the company has power to promote or assist in the promotion of undertakings of all kinds, particularly of those relating to ships, lighters, harbors, piers, docks, quays, wharves, tramways, railways, telegraphs, cables, telephones, etc. The capital of the company is £175,000. L. Hill, Nelson, is its attorney.

The Shuswap and Thompson River Boom Co. will apply next session of the Dominion Parliament for an act authorizing it to develop the navigable waters of the North and South Thompson Rivers, Kamloops Lake, Shuswap Lake and its several arms, the Lower Spallumcheen River and the navigable waters connected therewith, by establishing dams, slides, canals, removing impediments to navigation, to construct tramways, docks and wharves; and to acquire and operate for the company's purposes only telephone and telegraph lines. McGivern, Haydon and Greig, Ottawa, are solicitors for the applicants.

H. B. Co.'s Steamboat Peace River.

The Hudson's Bay Co.'s steamboat Peace River was designed in the U.S., and built by A. Watson, Victoria, B.C., afterwards being taken to pieces and reconstructed at Fort Vermillion. She is a stern-wheel boat, built for passengers and freight, her principal dimensions being: length, 110 ft.; beam, 22 ft.; draught, light, 2 ft. The season for navigation commences generally on May 1, and continues till late in Oct., during which time runs are made from Peace River Chutes to Hudson's Hope, a distance of about 540 miles. At present the chief trade on the route is in furs, but the Peace River Valley is considered to be one of the coming wheat growing areas of Alberta. The Hudson's Bay Co. has a large flour mill at Fort Vermillion. The illustration given on this page is from a photograph supplied by J. Sutherland, engineer of the steamboat Peace River.

THE HUDSON'S BAY COMPANY'S STEAMBOAT PEACE RIVER, WHICH RUNS BETWEEN PEACE RIVER CHUTES, ATHABASCA AND HUDSON'S HOPE, B.C., 540 MILES.

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Notices to Mariners.

No. 97. Oct. 4.—Nova Scotia lighthouse division—255. North Atlantic Ocean, Sable island, east end, intended change in character of light. England—256. West coast, St. George's channel, Small's light, alteration in character. Scotland—257. West coast, Hebrides, Glass island, alteration in character of light.

No. 98. Oct. 8.—Quebec—258. River St. Lawrence below Quebec, Traverse of St. Roch, lower end, lighthouse dismantled, and operation of light and fog alarm discontinued. Scotland—259. West coast, Island of Islay, Chuirn island, light established. 26. West coast, Loch Linnhe, Lady rock, light established. 261. West coast, Sound of Jura, Lowlandman's bay, light buoy established.

No. 99. Oct. 8.—Ontario.—262. Lake Ontario, Kingston harbor, re-arrangement of buoys. 263. Lake Erie, head of Welland Canal and approaches, Port Colborne, buoyage. United States—264. Detroit river, Windmill point, range light station, alterations.

No. 100. Oct. 10.—British Columbia—265. Strait of Georgia, sandheads of Fraser river, gas, whistling and bell buoy established. 266. Northern waters, Dixon entrance, shoal reported, off Zayas island. United States—267. Washington, Puget sound, Eagle harbor, range lights established.

No. 101. Oct. 15.—British Columbia—268. Vancouver Island, Juan de Fuca strait, Port San Juan, whistling buoy replaced by gas and whistling buoy. 269. Vancouver island, east coast, Kelp bar, change in position of gas and bell buoy. 270. Queen Charlotte islands, Graham island, north coast, Virago sound, directions for entering Naden harbor.

No. 102. Oct. 18.—Ontario—271. Lake Erie, Port Colborne, new fog alarm building erected on the eastern end of the west breakwater. 272. Lake Huron, Southampton, top of front range lighthouse carried away, temporary light exhibited. 273. Georgian bay, west side off Cape Smith, Campbell rock, buoy established.

No. 103. Oct. 18.—Quebec—274. Gulf of St. Lawrence, Magdalen islands, Bird rocks, change in fog alarm.

No. 104. Oct. 19.—Nova Scotia—275. Bay of Fundy, Lurcher shoal, lightship replaced on her station. Scotland—276. West coast, Firth of Clyde, Troon harbor, shoal in vicinity. 277. West coast, the Small isles, Sandy island, light established.

No. 105. Oct. 22.—278. Canadian Government wireless telegraph stations, revised list. See page 947.

No. 106. Oct. 22.—Quebec—279. River St. Lawrence, chart, Cap Levrard to Ste. Emelie, issued.

No. 107. Oct. 23.—British Columbia—280. Northern waters, Petrel channel, Lofty island, non-existent, hydrographic notes. Alaska—281. Revillagigedo channel, Hog rocks, light to be established. 282. Nichols passage, Port Chester approach, Gull island, light established.

No. 108. Oct. 24.—Ontario lighthouse division—283. Quebec, Ottawa river, Argenteuil bay and Jones island range lights.

No. 109. Oct. 26.—Quebec—284. River St. Lawrence below Quebec, Traverse of St. Roch, change in character of light shown from the Upper Traverse lighthouse.

No. 110. Oct. 29.—Nova Scotia—285. Lennox passage, Madame island, Grande Digue, lighthouse established. 286. Cape Breton island, south coast, Lennox passage, Goillon rock, beacon erected. Prince Edward Island—287. East coast. Cardigan bay, Georgetown harbor, St. Andrew's point, change in color of light.

No. 111. Oct. 30.—Quebec—288. River St. Lawrence, Hare island, north reef, uncharted rock. 289. River St. Lawrence, Cap Brulée or Mortée du Lac, main light improved. England—290. West coast, Scilly Isles, St. Mary's pier, alteration in light.

No. 112. Oct. 31—British Columbia—291. Vancouver island, west coast, Kyuquot sound, gas and whistling buoy established. 292. Vancouver island, west coast, Hesquiat harbor, whistling buoy established. 293. Strait of Georgia, Porlier pass, bell buoy established off east entrance. 294. Milbank sound, Vancouver rock, whistling buoy replaced by gas and whistling buoy.

No. 113. Nov. 2.—British Columbia—295. Chatham sound, Brown passage, shoal in approach to. 296. Queen Charlotte islands, north coast, Parry passage, shoal. 297. Queen Charlotte islands, Graham island, west coast, anchorage inside Frederick island.

No. 114. Nov. 4.—Ontario—298. Great Lakes and River St. Lawrence, dates to which lights will be kept in operation.

The following have been issued by the U.S. Hydrographic Department:

No. 45. Nov. 9—2042. St. Mary's river, West Neebish channel, hydrographic information.

No. 46. Nov. 16.—Great Lakes—2088. Light vessels and light buoys to be discontinued for the winter. 2089. Lights and fog signals to be discontinued for the winter.

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals in October:

ARTICLES.			CANADIAN CANAL	U.S. CANAL	TOTAL
Copper	Eastbound	Net tons	2,055	9,023	11,078
Grain	"	Bushels	2,311,304	3,529,807	5,841,111
Building stone	"	Net tons	....	150	150
Flour	"	Barrels	520,763	672,251	1,193,014
Iron ore	"	Net tons	1,691,712	4,461,796	6,153,508
Iron, pig	"	"	2,160	....	2,160
Lumber	"	M. ft. B.M.	4,253	67,834	72,087
Silver ore	"	Net tons	....	....	....
Wheat	"	Bushels	8,186,748	5,774,903	13,961,651
General merchandise	"	Net tons	4,866	7,199	12,065
Passengers	"	Number	918	538	1,456
Coal, hard	Westbound	Net tons	25,689	158,365	184,054
Coal, soft	"	"	245,252	828,128	1,073,380
Flour	"	Barrels	....	....	....
Grain	"	Bushels	294	....	294
Manufactured iron	"	Net tons	3,692	22,878	26,570
Salt	"	Barrels	17,540	63,053	80,593
General merchandise	"	Net tons	54,058	71,117	125,175
Passengers	"	Number	394	397	791
Freight—Eastbound		Net tons	2,066,338	4,929,110	6,995,448
" Westbound		"	331,203	1,089,946	1,421,149
Total freight		"	2,397,541	6,019,056	8,416,597
Vessel passages		Number	923	1,960	2,883
Registered tonnage		Net	1,903,904	4,886,201	6,790,105

Among the Express Companies.

W. E. Norman has been appointed route agent Canadian Ex. Co., with office at Toronto.

S. H. Baker, Sherbrooke, Que., has been appointed on the staff of the American Ex. Co., Quebec.

H. H. Carr has been appointed agent Dominion Ex. Co., North Bay, Ont., in place of A. Parker.

The Canadian Ex. Co. has resumed service over the P.E.I. Ry. between Montague Jct. and Montague.

A. C. Thorne, Dominion Ex. Co., Montreal, has been appointed agent at Halifax, N.S., in place of W. R. Spooner.

J. L. Stark has been appointed agent Dominion Ex. Co. at Revelstoke, B.C., in place of G. D. McKenzie, transferred to Edmonton, Alta.

C. A. Cunningham has been appointed route agent Canadian Northern Ex. Co., Winnipeg, in place of G. J. Bothwell, transferred.

The Board of Railway Commissioners has granted an extension of time to March, 1908, to the express companies in which to file their contract forms and have them approved

The Canadian Northern Ex. Co. has opened offices at the following places: Lavoy, Alta.; Fielding and Kenaston, Sask.; Glenella, Lavenham, Oakland, and Warren, Man.; Kakabeka Falls, Ont.

The Canadian Ex. Co. has opened offices at the following stations on the Windsor, Essex and Lake Shore Rapid Ry.: Cottam, Essex, Kingsville, Maidstone, North Ridge, Ruthven, and Leamington, Ont.

G. J. Bothwell, heretofore route agent, Canadian Northern Ex. Co., has been appointed joint agent of the Canadian Northern and Great Northern Ex. Cos. at Winnipeg, in place of W. T. Perry, resigned.

A judgment of some importance to express companies was rendered recently in the Superior Court, in the case of Rutenberg & Co. vs. Dominion Ex. Co. The plaintiffs claimed $1,920.75 for a consignment of furs, presumed to have been destroyed in one of the Express Co.'s cars near Cartier, Ont., in Nov., 1906. The defence was that the company was not liable, as the value of the furs had not been declared at the time of dispatch, and that the action should have been taken against the C.P.R., in whose car the furs were destroyed. Justice Loranger, in delivering judgment, held that plaintiffs were not bound by the terms of the receipt unless all the conditions were previously specially pointed out in order to have consent. Moreover, defendants were bound to deliver the goods or to pay their value, and the burden of proof was upon them to show that the goods had been destroyed by fire, and without any fault on the part of defendants' employes. Defendants having failed to make such proof, judgment went against them for the full amount of plaintiffs' claim with costs.

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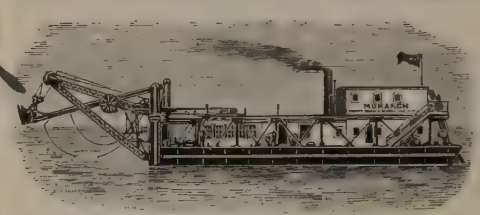

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Telegraph and Cable Matters.

G. Marconi sailed from Quebec for England on the Allan Line steamship Victorian, Nov. 8.

The Canadian Northern Telegraph Co. has opened an office for commercial business at Old Battleford, Sask.

By the burning of the I.C.R. freight sheds at Campbellton, N.B., Nov. 1, six months' supplies for the G.N.W. Telegraph Co.'s office at that point were destroyed

Application was recently made at St. John's, Nfld., to the Governor-in-Council, for letters patent for a new system of wireless telegraphy, by E. Bellini and A. Tosi, of Paris, France.

The G.T.R. telegraph department is installing 20 new wires at its Glencoe, Ont., station, with the object of making it the testing point for all lines west of London and St. Thomas, Ont.

Telestereography is the somewhat fearsome name which has been applied by the inventor to a mechanical system whereby copies of photographs, etc., may be transmitted over ordinary telegraph wires.

E. J. Haughton, who had charge of the west coast wire on Vancouver Island, recently taken over from the C.P.R. by the Dominion Government, has been appointed in charge of the Government wireless telegraph station at Victoria, B.C.

The strike of operators employed by the Western Union Telegraph Co., which commenced Aug. 12, was by a vote of the operators' union definitely suspended from Nov. 7, "until a full opportunity has been given the telegraph companies to make good the assurances practically conveyed to us."

All the vessels of the Nippon Yusen Kaisha fleet running between Vancouver, B.C., and Japan, are to be equipped with wireless telegraph apparatus, thus enabling them to communicate with the stations on the B.C. coast, and the one established near the Inaboe lighthouse on the first point reached on the Japanese coast.

Hon. W. H. Cushing, Minister of Public Works for Alberta, in the course of a speech at Vermillion, Man., Nov. 6, said he thought it might be advisable in the near future for the Government to be given control of the telegraphs. It would cost very little to put in a Government telegraph line as the telephone poles now in use on the Government lines could be utilized.

The Government telegraph line on the west coast of Vancouver island, connecting Victoria with Port San Juan, Carmanah, Cape Beale, Pachena, Banfield Creek, Ucluelet, Alberni and Clayoquot, which has hitherto been operated by the C.P.R. in connection with its own lines, has been taken over by the Government, and will in future be operated by the Dominion Public Works Department.

J. Taylor, Dominion Atlantic Ry. station agent at Weymouth, N.S., has been missing for over a month, and a warrant has been issued for his arrest. The books, it is stated, are in a bad state, and there is a considerable shortage of cash. It is presumed that Taylor is in New York.

The Winterport Coal Mining Co. has been incorporated under the New Brunswick Companies Act, with a capital of $99,000 and offices at Winterport Mines, N.B., for the purpose of acquiring the business now carried on as the Winterport Coal Mines; to develop and extend the same, and in connection therewith to construct and operate tramways, wharves, piers, and to purchase or charter steam and other vessels. The provisional directors are: J. S. and C. H. Gibbon, W. E. Vroom, N. S. Springer, St. John, N.B.; C. M. Larkin, Newcastle, N.B

Marine Wireless Telegraph Stations.

Following is a list of wireless telegraph stations established by the Department of Marine:

STATIONS	CALL LETTERS
Fame Point lighthouse, Gaspé Co., Que.	F P
Heath Point lighthouse, Anticosti, Que.	H P
Cape Whittle, Quebec Labrador	W R
Point Rich lighthouse, west coast Nfld.	T C
Cape Ray lighthouse, s.w. pt. Nfld.	C R
Cape Sable lighthouse, s.w. pt. N.S.	S B
Partridge Id. lighthouse, St. John, N.B.	S J
Clark City, Seven Islands, north shore Que.	C K
Father Pt. lighthouse, south shore, Que.	R T

The above stations have a normal range of 125 miles and are available, day and night, for communication with vessels fitted with Marconi apparatus.

Point Amour lighthouse, Nfld., Labrador	P R
Belle Isle lighthouse, s.e. end of island, Nfld.	B L
Cape Race lighthouse, s.e. pt. Nfld.	C E
North Sydney, entrance to Sydney Harbor, N.S.	N D

The above stations have a normal range of 60 miles and are available, day and night, for communication with vessels equipped with Marconi apparatus.

Cape Bear lighthouse, s.e. end of P.E.I.	B E
Pictou, N.S.	R U

The above stations have a normal range of 60 miles, but are in operation only during the winter months, primarily for communication with the P.E.I. winter ferry.

The stations formerly operated at Belle Isle and Chateau Bay by the Public Works Department have been discontinued and dismantled.

Sable Island, Atlantic Ocean	S D
Camperdown, entrance to Halifax Harbor, N.S.	C N

These stations are operated by the Marconi Wireless Telegraph Co. of Canada, Ltd., and are available, day and night, for communication with vessels equipped with Marconi apparatus.

The following stations located in British Columbia are owned and operated by the Department of Marine. After Dec. 15 they will be available, day and night, for communication with vessels equipped with any system of wireless telegraphy. They have a normal range of 125 miles, and for communication the 300-metre wave should be used.

Estevan Point, Hole-in-the-wall light stn.	U S D
Pachena Point, light station	K P D
Victoria, Shotbolt hill	V S D
Point Grey, extremity	P G D
Cape Lazo, summit	S K D

General Telephone Matters.

The North-Western Telephone Co. has taken over the management of the telephone system at Phœnix, Sask.

The Bell Telephone Co. has been granted an extension of time to March, 1908, in which to have its telephone rates approved.

The Norfolk County Telephone Co. has commenced operations on the new line from Waterford to Lynedoch, via Delhi, Ont.

The Doukhobor Telephone Co. has been incorporated under the ordinance of the Northwest Territories respecting public companies.

F. Harris, local manager of the New Brunswick Telephone Co. at Sackville, was married recently to Miss G. Hazen, at Fredericton, N.B.

The Bell Telephone Co. has been granted permission to erect poles on various streets in Toronto, and to undertake underground work in connection therewith.

The American Telephone and Telegraph Co., operating the telephone lines in the United States, has raised the night rates to the same figure as the day rates.

The ratepayers of South Crosby township, Brockville, Ont., have passed a resolution providing for the construction of a rural telephone system throughout the township.

A report from Berlin, Germany, states that wireless telephony is being conducted from Nauen to various places about 60 miles distant. It is said that conversation can be heard quite clearly.

The Bell Telephone Co.'s new north branch exchange at Toronto is almost completed, and it was hoped to have it ready by Dec. 1.

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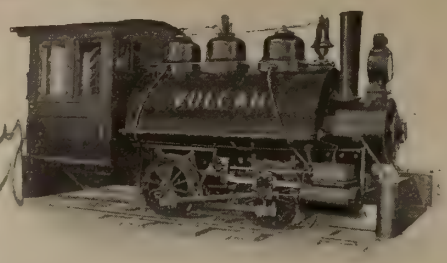

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W. J. Jones, chief of the Bell Telephone Co.'s instrument department at Toronto, was entertained to dinner recently and presented with a smoking set by employes of the company, on his leaving the service after 30 years' connection with it.

K. J. Dunstan, Toronto manager of the Bell Telephone Co., in referring to the Telephone Commission's report, recently said, although the report was against the company, the facts were not as stated. The efforts made by the company proved to be correct to bring about a remedy for existing conditions.

L. De Forest has equipped one of the U.S. battleships with a wireless telephone system, and it is stated that all the vessels of the fleet going to the Pacific will be similarly equipped. Tests have shown that messages can be received by an ordinary telephone receiver, and conversations have been carried on at a distance of 22 miles.

The Minister of Public Works for Alberta, speaking at Vermillion, Man., Nov. 6, said that the Government originally intended to construct long distance telephone lines only, but had since determined to construct rural lines, and to equip local exchanges throughout the province. As a result of this policy they now had over 500 miles of long distance lines completed, and in operation, a number of local exchanges equipped, and were going steadily ahead with the construction of additional lines.

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Montreal Steel Works.....Montreal.

Axles
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Homer Taylor.....Montreal.

Badges
American Railway Supply Co.....New York.
R. Woodman Mfg. & Supply Co....Boston, Mass.

Baggage Checks
R. Woodman Mfg. & Supply Co....Boston, Mass.

Bearings, Side
Chicago Railway Equipment Co.....Chicago. Ill.

Blankets and Bedding
The Hudson's Bay Co.....

Blasting Powder
Standard Explosives Limited.....Montreal.

Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
E. Leonard & Sons.....London, Ont.
Jno. McDougall, Caledonian IronWorks Co. Montreal
Polson Iron Works.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Internally Fired
Robb Engineering Co.....Amherst, N.S.

Boilers, Portable
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boilers, Stationary and Marine
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Boiler, Staybolt Iron or Steel Bars
Falls Hollow Staybolt Co. Cuyahoga Falls, Ohio.

Boilers, Steam
Babcock & Wilcox (Ltd.).....Montreal.
Robb Engineering Co.....Amherst, N.S.

Boilers, Water Tube
Babcock & Wilcox (Ltd.).....Montreal.
E. Leonard & Sons.....London, Ont.
Jno. McDougall, Caledonian Iron Works Co. Montreal
Robb Engineering Co.....Amherst, N.S.

Boilers Tubes
Jas. W. Pyke & Co.....Montreal.

Bolsters
Dominion Car and Foundry Co.....Montreal.

Bolts, Bridge
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Bolts, Carriage and Machine
Toronto Bolt and Forging Co.....Toronto.

Bolts, Track
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Box Car Loaders
Mussens Limited.....Montreal.

Brake Beams
Chicago Railway Equipment Co.....Chicago, Ill.
Dominion Car and Foundry Co.....Montreal.

Brake Shoes
American Brake Shoe & F'dry Co..Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.
N. J. Holden Co., Ltd.....Montreal.
Railway Materials Co.....New York.

Brass and Copper Cloth
The B. Greening Co.....Hamilton, Ont.

Bridge Numbers
Acton Burrows Limited.....Toronto.

Bridges
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Bumping Posts
McCord & Co.....Chicago, Ill.
Mechanical Mfg. Co.....Chicago, Ill.

Buoy Lighting
Safety Car Heating and Lighting Co..New York.

Cables, Electric and Feeder
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal

Caboose Heaters
Geo. R. Prowse.....Montreal.

Caps
W. H. Coddington.....Hamilton, Ont.

Car Castings
American Brake Shoe & F'dry Co...Mahwah, N.J.
Canadian Iron and Foundry Co.....Montreal.

Car Cleaner
Modoc Soap Co.....Philadelphia, Pa.

Car Closets
Duner Co.....Chicago, Ill.

Car Curtains and Fixtures
N. J. Holden Co., Ltd.....Montreal.

Car Furnishings
G. S. Wood.....Chicago, Ill.

Car Heating
Wm. C. Baker Heating & Supply Co..New York.
Canadian Gold Car Heating & Lighting Co. Montreal.
Safety Car Heating and Lighting Co...New York.
Peter Smith Heater Co.....Detroit, Mich.

Car Jacks
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.

Car Kitchen Equipments
Geo. R. Prowse.....Montreal.

Car Lighting
Bliss Electric Car Lighting Co...Milwaukee, Wis.
Consolidated Ry. Electric Light & Equip. Co., N.Y.
Canadian Cold Car Heating & Lighting Co. Montreal.
Safety Car Heating and Lighting Co...New York.

Car Movers
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
R. Woodman Mfg. & Supply Co....Boston, Mass

Car Ranges
Geo. R Prowse.....Montreal

Car Replacers
Alexander Car Replacer Mfg. Co....Scranton, Pa.
N. J. Holden Co., Ltd.....Montreal.
F H. Hopkins & Co.....Montreal.

Car Seals
R. Woodman Mfg. & Supply Co....Boston, Mass.

Car Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Cars
Canada Car Co., (Ltd).....Montreal, Que.
Crossen Car Mfg. Co.....Cobourg, Ont.
Dominion Car and Foundry Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
Hart-Otis Car Co. (Ltd.).....Montreal.
Rhodes Curry & Co.....Amherst, N.S.

Car Windows
O. M Edwards.....Syracuse, N.Y.

Castings
Crossen Car Mfg. Co.....Cobourg, Ont.

Castings, Brass
Canadian Bronze Co.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.
St. Thomas Brass Co.....St. Thomas, Ont.

Castings, Iron
Canada Car Co., Ltd.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Kerr Engine Co.....Walkerville, Ont.

Castings, Iron and Steel
American Brake Shoe & F'dry Co..Mahwah, N.J.

Castings, Malleable
Homer Taylor.....Montreal.

Castings, Steel
Canadian Iron and Foundry Co.....Montreal.
Montreal Steel Works.....Montreal.
Rhodes Curry & Co.....Amherst, N.S.

Cast-Steel Hammers
American Brake Shoe & F'dry Co..Mahwah, N.J.

Cast-Steel Track Tools
American Brake Shoe & F'dry Co..Mahwah, N.J.

Cast-Steel Wrenches
American Brake Shoe & F'dry Co...Mahwah, N.J.

Cement Machinery
Jas. W. Pyke & Co.....Montreal.

Chains
B J Coghlin & Co.....Montreal.

Charcoal Iron Staybolt Bars
Falls Hollow Staybolt Co..Cuyahoga Falls, Ohio.

Chimneys
Steel Concrete Co. (Ltd.).....Montreal.

Coal Haulage Ropes
The B. Greening Co.....Hamilton Ont.

Coal Storage Plants
Steel Concrete Co. (Ltd.).....Montreal.

Concrete Mixers and Rock Crushers
Goold, Shapley & Muir Co.....Brantford, Ont.
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Concrete Pipe
Steel Concrete Co. (Ltd.).....Montreal.

Contractors' Plant
M. Beatty & Sons.....Welland, Ont.
J. T. Gardner.....Chicago, Ill.
F. H. Hopkins & Co.....Montreal.
The W. H. Kelson Co.....Montreal.
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.
Vulcan Iron Works Co.....Toledo, Ohio.

Contractors' Supplies
E. F. Dartnell.....Montreal.
F. H. Hopkins & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Toronto Pressed Steel Co.....Toronto.

Conveyors, Coal and Ash
Babcock & Wilcox (Ltd.).....Montreal.

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Latrobe Steel & Coupler Co. ..... Philadelphia, Pa.
McConway & Torley Co. ..... Pittsburg, Pa.
National Malleable Castings Co. .. Cleveland, Ohio.
Washburn Steel Castings & Coupler Co., ... Minneapolis, Minn.

Cross Arms, Top Pins and Side Blocks
Canadian General Electric Co. ..... Toronto.

Cross Arm Braces
Canadian General Electric Co. ..... Toronto.
Toronto Bolt and Forging Co. ..... Toronto.

Crossing Gates
The N. L. Piper Railway Supply Co. ..... Toronto.

Crowbars
B. J. Coghlin & Co. ..... Montreal.
Toronto Bolt and Forging Co. ..... Toronto.

Culverts
Steel Concrete Co. (Ltd.) ..... Montreal.

Culvert Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co, Hamilton.

Cuts
Acton Burrows Limited ..... Toronto.

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Hayes Track Appliance Co. ..... Geneva, N.Y.

Derrick Ropes
Dominion Wire Rope Co. ..... Montreal.
The B. Greening Co. ..... Hamilton, Ont.

Derricks
M Beatty & Sons ..... Welland, Ont.
E. F. Dartnell ..... Montreal.
Miller Bros. & Toms ..... Montreal.
Mussens Limited ..... Montreal.

Diaphragms for Vestibules
G. S. Wood ..... Chicago, Ill.

Dies
Butterfield & Co. ..... Rock Island, Que.

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John Date ..... Montreal.
Mussens Limited ..... Montreal.

Doors (Ex-Platform Trap)
O. M. Edwards ..... Syracuse, N.Y.

Door Signs
Acton Burrows Limited ..... Toronto.

Draft Gear
Farlow Draft Gear Co. ..... Baltimore, Md.
McCord & Co. ..... Chicago, Ill.
Standard Coupler Co. ..... New York City.

Drawing Materials
Eugene Dietzgen Co., Ltd. ..... Toronto.
James Foster ..... Toronto.

Dredges
M. Beatty & Sons ..... Welland, Ont.
Vulcan Iron Works Co. ..... Toledo, Ohio.

Drills
W. Abbott ..... Montreal.

Drills, Twist
Baldwin Steel Co. ..... New York.

Dry Goods
The Hudson's Bay Co. .....

Dump Cars (Contractors')
F. H. Hopkins & Co. ..... Montreal.
Toronto Pressed Steel Co. ..... Toronto.

Dynamo and Electric Castings
American Brake Shoe & F'dry Co. .. Mahwah, N.J.

Economizers
Babcock & Wilcox (Ltd.) ..... Montreal.

Electric Car Route Signs
Acton Burrows Limited ..... Toronto.

Electric Cranes
Babcock & Wilcox ..... Montreal.
Canada Foundry Co. ..... Toronto.
E. F. Dartnell ..... Montreal.
Dominion Bridge Co. ..... Montreal.
Mussen Limited ..... Montreal.

Electric Ry. Brake Shoes
American Brake Shoe & F'dry Co. .. Mahwah, N J.

Electrical Fuses
Standard Explosives Limited ..... Montreal.

Enameled Iron Signs
Acton Burrows Limited ..... Toronto.

Engineers' Supplies
Canadian Fairbanks Co. ..... Montreal.

Engines, Automatic
Robb Engineering Co. ..... Amherst, N.S.

Engines, Corliss
E. Leonard & Sons ..... London, Ont.
Robb Engineering Co. ..... Amherst, N.S.

Engines, Gasoline
Canadian Fairbanks Co. ..... Montreal.
Goold, Shapley & Muir Co. ..... Brantford, Ont.
Ontario Wind Engine and Pump Co. ..... Toronto.

Engines, Hoisting
M. Beatty & Sons ..... Welland, Ont.

Engines, Stationary and Marine
Canada Foundry Co. ..... Toronto.
Polson Iron Works ..... Toronto.
Robb Engineering Co. ..... Amherst N.S.

Excavators
Vulcan Iron Works ..... Toledo, Ohio.

Explosives
Standard Explosives Limited ..... Montreal.

Express Office Signs
Acton Burrows Limited ..... Toronto

Feedwater Heaters
Canadian Fairbanks Co. ..... Montreal.
Robb Engineering Co. ..... Amherst, N.S.

Fencing
Banwell-Hoxie Fence Co. ..... Hamilton, Ont.
Canada Foundry Co. ..... Toronto.
McGregor Banwell Fence Co. ... Walkerville, Ont.
Owen Sound Wire Fence Co. .. Owen Sound, Ont.
Page Wire Fence Co. Ltd. ..... Walkerville, Ont.

Fire Brick
Mussens Limited ..... Montreal.
F. B. Stevens ..... Detroit, Mich.

Fire Clay
F. B Stevens ..... Detroit, Mich.

Flags
The Hudson's Bay Co. .....

Flour
The Hudson's Bay Co. .....

Forgings
Canada Car Co., Limited ..... Montreal.
Crossen Car Mfg. Co. ..... Cobourg, Ont.
Hamilton Steel & Iron Co., Ltd. .. Hamilton, Ont.
Standard Steel Works ..... Philadelphia, Pa.

Foundry Facings
F. B. Stevens ..... Detroit, Mich.

Foundry Supplies
F. B. Stevens ..... Detroit, Mich.

Fuse Batteries
Standard Explosives Limited ..... Montreal.

Fuse Detonators
Standard Explosives Limited ..... Montreal.

Gaskets
McCord & Co. ..... Chicago, Ill.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Gates
Banwell-Hoxie Fence Co. ..... Hamilton, Ont.
Canada Foundry Co. ..... Toronto.
McGregor Banwell Fence Co. ... Walkerville, Ont.
Owen Sound Wire Fence Co. .. Owen Sound. Ont.
Page Wire Fence Co. Ltd. ..... Walkerville, Ont.

Gauges, Locomotive Steam
Golden-Anderson Valve Specialty Co., Pittsburg, Pa.

Glue Brushes
Wolfe Brush Co. ..... Pittsburg, Pa.

Grain Elevators
John S. Metcalfe Co. ..... Chicago, Ill.

Groceries
The Hudson's Bay Company .....

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James Smart Mfg. Co. ..... Brockville, Ont.

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Crossen Car Mfg. Co. ..... Cobourg, Ont.
F. H. Hopkins & Co. ..... Montreal.
Mussens Limited ..... Montreal.
Rice Lewis & Son ..... Toronto.
Toronto Pressed Steel Co. ..... Toronto.

Hardware
The Hudson's Bay Co. .....
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Hats
W. H. Coddington ..... Hamilton, Ont.

Headlights
The N. L. Piper Railway Supply Co. ..... Toronto.
Pyle National Electric Head Light Co. Chicago, Ill.

Headlinings
Crossen Car Mfg. Co. ..... Cobourg, Ont.

Hoisting Machinery
Brown Hoisting Machinery Co. ... Cleveland, Ohio

Hollow Staybolt Iron and Steel Bars
Falls Hallow Staybolt Co. . Cuyahoga Falls, Ohio.

Hoppers, Car (Wet or Dry)
Duner Co. ..... Chicago, Ill.

Hose, Air Brake and Steam
G. S. Wood ..... Chicago, Ill.

Hydrants
Kerr Engine Co. ..... Walkerville, Ont.

Illustrations
Acton Burrows Limited ..... Toronto.

Inspections
R. W. Hunt & Co. ..... Montreal.

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Eugene Dietzgen Co., Ltd. ..... Toronto.
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Interlocking Signals
Montreal Steel Works ..... Montreal.

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Hamilton Steel & Iron Co., Ltd. . Hamilton, Ont.

Iron, Bar
Homer Taylor ..... Montreal.

Iron, Pig
Hamilton Steel & Iron Co., Ltd. . Hamilton, Ont.

Iron Signs
Acton Burrows Limited ..... Toronto.

Iron Staybolt Bars
Falls Hollow Staybolt Co. . Cuyahoga Falls, Ohio.

Jacks
James Smart Mfg. Co. ..... Brockville, Ont.

Japans
McCaskill, Dougall & Co. ..... Montreal.

Journal Bearings
Canada Foundry Co. ..... Toronto.
Canadian Bronze Co. ..... Montreal.
Crossen Car Mfg. Co. ..... Cobou g, Ont.
Kerr Engine Co. ..... Walkerville Ont.
Jas W. Pyke & Co. ..... Montreal.
St. Thomas Brass Co. ..... St. Thomas, Ont.

Journal Boxes
N. J. Holden Co., Ltd ..... Montreal.
McCord & Co. ..... Chicago, Ill.

Kalsomine Brushes
Wolfe Brush Co. ..... Pittsburg, Pa.

Lager Beer, &c.
E. L. Drewry ..... Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co. ..... Hamilton Ont.

Lamps and Lanterns
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The Hiram L. Piper Co. ..... Montreal.
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Locomotive Lagging and Covering
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Locomotives (Compressed Air)
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H. K. Porter Co. ..... Pittsburg, Pa.

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Burnham, Williams & Co. ..... Philadelphia, Pa.
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Locomotive and Machine Co. of Montreal

Locomotives (Logging)
Burnham, Williams & Co. ..... Philadelphia, Pa.
Canadian Locomotive Co. ..... Kingston, Ont.

Locomotives (Rack)
Burnham, Williams & Co. ..... Philadelphia, Pa.
Canadian Locomotive Co. ..... Kingston, Ont.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Burnham, Williams & Co. ..... Philadelphia, Pa.
Canada Foundry Co. ..... Toronto.
Canadian Locomotive Co. ..... Kingston, Ont.
J. T. Gardner ..... Chicago, Ill.
The W. H Kelson Co. ..... Montreal.
Locomotive and Machine Co. of Montreal.
H. K. Porter Co. ..... Pittsburg, Pa.
Vulcan Iron Works ..... Wilkesbarre, Pa.

Locomotive Staybolts
Falls Hollow Staybolt Co. . Cuyahoga Falls, Ohio.
Flannery Bolt Co. ..... Pittsburg, Pa.

Lubricators
McCord & Co. ..... Chicago, Ill.
Homer Taylor ..... Montreal.

Machine Tools
W. Abbott ..... Montreal.
Canadian Fairbanks Co. ..... Montreal.

Machinery, Power
Jno. McDougall, Caledonian Iron Works Co. Montreal

Machinery Special
Miller Bros. & Toms ..... Montreal.

Machinery, Transmission
Miller Bros. & Toms ..... Montreal.

Manganese Steel Castings
Montreal Steel Works ..... Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co. . Mahwah, N.J.
Canadian Iron and Foundry Co. ..... Montreal.

Marine Supplies
Rice Lewis & Son.....Toronto.

Milepost Numbers
Acton Burrows Limited.....Toronto.

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W. Abbott.....Montreal.
Baldwin Steel Co.....New York.

Motors
McCord & Co.....Chicago, Ill.

Nickel
The Orford Copper Co.....New York.

Nickel for Nickel Steel
The Orford Copper Co.....New York.

Numbers
Acton Burrows Limited.....Toronto.

Nut Locks
Positive Lock Washer Co..... Newark, N.J.

Nuts, Square and Hexagon
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Oakum
The Hudson's Bay Company.....
M. McKenzie Co., Limited.....Montreal.

Office Fittings
Canadian Office & School Furniture Co., Preston, Ont.

Office Signs
Acton Burrows Limited.....Toronto.

Oil Furnaces
Railways Materials Co.....New York.

Oil Tank
S. F. Bowser & Co., Limited.....Toronto.

Oils
Canadian Oil Co.....Toronto.
Galena Signal Oil Co. Franklin, Pa., and Toronto.

Packing
The N. L. Piper Railway Supply Co....Toronto.

Paint Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Dusters
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Scrubs
Wolfe Brush Co.....Pittsburg, Pa.

Painters' Wall Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Paints
Canadian Oil Co.....Toronto.

Paints, Damp Resisting
E. F. Dartnell.....Montreal.

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Valentine & Sons Publishing Co.....Montreal.

Pinch Bars
The N. L. Piper Railway Supply Co....Toronto.

Pipe and Pipe Coverings
Wm. C. Baker Heating & Supply Co..New York.

Pipe Covering
Canadian Fairbanks Co.....Montreal.

Pipe Stocks
Butterfield & Co.....Rock Island, Que.

Platforms, Steel
Standard Coupler Co.....New York City.

Plating Compositions
F. B. Stevens.....Detroit, Mich.

Ploughs, Contractors'
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Plumbago
F. B. Stevens.....Detroit, Mich.

Pneumatic Tools
N. J. Holden Co., Ltd. .....Montreal.

Polishers' Supplies
F. B. Stevens.....Detroit, Mich.

Polishing Compositions
F. B. Stevens.....Detroit, Mich.

Porter
E. L. Drewry.....Winnipeg.

Portable Boilers
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
Robb Engineering Co.....Amherst, N.S.

Power Houses
Steel Concrete Co. (Ltd.).....Montreal.

Preservative for Hose
G. S. Wood.....Chicago, Ill.

Printing
The Hunter Rose Co.....Toronto.
The Mail Job Printing Company.....Toronto.

Pumps
S. F. Bowser & Co., Limited.....Toronto.
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co....Toronto.
James Smart Mfg. Co.....Brockville, Ont.

Pumps (Centrifugal)
M Beatty & Sons.....Welland, Ont.

Rail Benders, Roller
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.

Rails (new)
Dominion Iron & Steel Co.....Sydney, N.S.
Drummond, McCall & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
J. T. Gardner.....Chicago, Ill.
J. J. Gartshore.....Toronto.

Rails (for relaying)
F. H Hopkins & Co.....Montreal.
J. J. Gartshore.....Toronto.
Mussens Limited.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Rail Joints
The Rail Joint Co. of Canada .....Montreal.

Railway Pile Drivers
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.

Railway Supplies
Canadian Fairbanks Co.....Montreal.
The W. H. Kelson Co.....Montreal.
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.
Rice Lewis & Son.....Toronto.

Reamers
W. Abbott.....Montreal.
Baldwin Steel Co.....New York.
Butterfield & Co.....Rock Island, Que.

Refrigerators
Geo. R. Prowse.....Montreal.

Rivets, Boiler, Bridge and Structural
Canada Foundry Co.....Toronto.
Toronto Bolt and Forging Co.....Toronto.

Rolled Wheels
Standard Steel Works.....Philadelphia, Pa.

Roof Trusses
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Rope
F. H. Hopkins & Co. .....Montreal.
The Hudson's Bay Co.....

Rotary Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.

Roundhouses
Steel Concrete Co. (Ltd.).....Montreal.

Rubber Goods, Mechanical
G. S. Wood.....Chicago, Ill.

Sash Balances
O. M. Edwards.....Syracuse, N.Y.

Sash Locks
O. M Edwards.....Syracuse, N.Y.

Saw Steel
Montreal Steel Works.....Montreal.

Scrapers (Wheel and Drag)
Bechtels Limited.....Waterloo, Ont.
F. H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Screw Plates
Butterfield & Co.....Rock Island, Que.

Screws, Coach and Lag
Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
Acton Burrows Limited.....Toronto.

Semaphores
The N. L. Piper Railway Supply Co....Toronto.

Sewer Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Shade Rollers
O. M. Edwards.....Syracuse, N.Y.

Shafting, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Shaking Grates
Babcock & Wilcox (Ltd.).....Montreal.

Ship Lamps
The Hiram L. Piper Co.....Montreal.
The N. L. Piper Railway Supply Co....Toronto.

Ships
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Signal House Numbers
Acton Burrows Limited.....Toronto.

Signals
McClintock Mfg. Co.....St. Paul, Minn.
The Hiram L. Piper Co.....Montreal.
N. L Piper Railway Supply Co.....Toronto.

Signs
Acton Burrows Limited.....Toronto.

Slack Adjusters
Chicago Railway Equipment Co.....Chicago. Ill.

Sledges
James Smart Mfg. Co.....Brockville, Ont.

Snow Ploughs
Crossen Car Mfg. Co.....Cobourg, Ont.
Rhodes Curry & Co.....Amherst, N.S.

Speedicut High Speed Steel
Montreal Steel Works.....Montreal.

Speed Indicators
R. Woodman Mfg. & Supply Co...Boston. Mass.

Spikes, Railway, Ship or Pressed
Hamilton Steel & Iron Co., Ltd..Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.
Toronto Bolt and Forging Co.....Toronto.

Spreader Cars
F. H. Hopkins & Co.....Montreal.

Spring Dampeners
McCord & Co.....Chicago, Ill.

Springs
B. J Coghlin.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
Wm. C. Baker Heating & Supply Co..New York.

Station Name Signs
Acton Burrows Limited.....Toronto.

Station Seats
James Smart Mfg. Co.....Brockville, Ont.

Staybolts, Flexible
Flannery Bolt Co.....Pittsburg, Pa.

Staybolt Iron or Steel Bars, Hollow
Falls Hollow Staybolt Co...Cuyahoga Falls, Ohio.

Staybolt Taps
Butterfield & Co.....Rock Island, Que.

Steam Attachments for Car Heating
Wm C. Baker Heating & Supply Co..New York.

Steam Couplers
Safety Car Heating and Lighting Co...New York.

Steam Shovels
M. Beatty & Sons.....Welland, Ont.
F H. Hopkins & Co.....Montreal.
Mussens Limited.....Montreal.
Vulcan Iron Works.....Toledo, Ohio.

Steamship Supplies
The W. H. Kelson Co.....Montreal

Steamships
Polson Iron Works.....Toronto.

Steamship Signs
Acton Burrows Limited.....Toronto.

Steel
W. Abbott.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.

Steel, Automobile
Baldwin Steel Co.....New York.

Steel Buildings
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.

Steel, Fire Box
Homer Taylor.....Montreal.

Steel, High Speed
Baldwin Steel Co.....New York.

Steel for Springs
James Hutton & Co.....Montreal.

Steel, Nickel, for Nickel
The Orford Copper Co.....New York.

Steel Plates
Jas. W. Pyke & Co.....Montreal.

Steel Rolling Doors
Mussens Limited.....Montreal.

Steel, Tool
Baldwin Steel Co.....New York.
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.

Steel Tyres
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.

Stokers, Mechanical
Babcock & Wilcox (Ltd.).....Montreal.

Stoves
James Smart Mfg. Co.....Brockville, Ont.

Structural Metal Work
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal
Jas. W. Pyke & Co.....Montreal.
Steel Concrete Co. (Ltd.).....Montreal.

Submarine Signals
Submarine Signal Co.....Boston Mass.

Superheaters
Babcock & Wilcox (Ltd.).....Montreal.

Switches
Hayes Track Appliance Co.....Geneva, N.Y.
Montreal Steel Works.....Montreal.

Switch Lamps
The N. L. Piper Railway Supply Co.....Toronto.

Switch Ropes
The B. Greening Co.....Hamilton, Ont.
F. H. Hopkins & Co.....Montreal.

Switch Stands
Hayes Track Appliance Co.....Geneva, N.Y.

Switch Targets
Acton Burrows Limited.....Toronto.

Tanks and Tank Fixtures
Canadian Fairbanks Co.....Montreal.
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Jno. McDougall Caledonian Iron Works Co.Montreal
Ontario Wind Engine and Pump Co.....Toronto.
Steel Concrete Co. (Ltd.).....Montreal.

Taps
Butterfield & Co.....Rock Island, Que.

Telegraph and Telephone Office Signs
Acton Burrows Limited.....Toronto.

Terra Cotta Fireproofing
E. F. Dartnell.....Montreal.

Ticket Cases
Canadian Office and School Furniture Co., Preston.

Ticket Punches
R. Woodman Mfg. & Supply Co...Boston, Mass.

Tie Plates
B. J. Coghlin & Co.....Montreal.

Ties
Fullerton Lum. & Shin. Co. (Ltd.), Vancouver, B.C.

Tiling, Glass
E. F. Dartnell.....Montreal.

Timber
Fullerton Lum. & Shin. Co. (Ltd.), Vancouver, B.C.

Tires
Standard Steel Works.....Philadelphia, Pa.

Tools
James Smart Mfg. Co.....Brockville, Ont.

Towers
Goold, Shapley & Muir Co.....Brantford, Ont.

Track Jacks
Canadian Fairbanks Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.
A. O. Norton.....Coaticook, Que.

Tracklaying Lorries
Crossen Car Mfg. Co.....Cobourg, Ont.
F. H. Hopkins & Co.....Montreal.

Tracklaying Machinery
F. H. Hopkins & Co.....Montreal.

Track Tools
B. J. Coghlin & Co.....Montreal.
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
Mussens Limited.....Montreal.

Tramway Equipment
J. J. Gartshore.....Toronto.

Trap Doors
O. M. Edwards.....Syracuse, N.Y.

Trucks
James Smart Mfg. Co.....Brockville, Ont.

Trucks (Car)
Standard Car Truck Co.....Chicago, Ill.

Trucks (Electric Car)
Burnham, Williams & Co.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.

Trucks (Railroad and Warehouse)
Canadian Fairbanks Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Turnbuckles
Montreal Steel Works.....Montreal.

Turntables
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont
Dominion Bridge Co.....Montreal.

Turntable Tractors
Homer Taylor.....Montreal.

Typewriters
United Typewriter Co., Limited.....Toronto.

Uniform Buttons
R. Woodman Mfg. & Supply Co....Boston, Mass.

Uniform Caps
W. H. Coddington.....Hamilton, Ont.

Valves, Brass Gate
Kerr Engine Co.....Walkerville, Ont.

Valves, Brass Globe
Kerr Engine Co.....Walkerville Ont.

Valves, Iron and Brass
Canada Foundry Co.....Toronto.
Canadian Fairbanks Co.....Montreal.

Valves, Iron Gate
Kerr Engine Co.....Walkerville, Ont.

Varnish Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Varnishes
Canadian Oil Co.....Toronto.
McCaskill Dougall & Co.....Montreal.

Vessels
Polson Iron Works.....Toronto.

Waste
B J. Coghlin & Co.....Montreal.
M. McKenzie Co., Limited.....Montreal.
N. L. Piper Railway Supply Co.....Toronto.

Water Filters
Geo. R. Prowse.....Montreal.

Water Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co., Hamilton.

Water Softeners
Babcock & Wilcox (Ltd.).....Montreal.

Weather Strips
O. M. Edwards.....Syracuse, N.Y.

Wheelbarrows
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.

Wheels, Car
Canada Car Co., Limited.....Montreal.
Canadian Iron and Foundry Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa.

Wheels, Locomotive
Canadian Iron and Foundry Co.....Montreal.

Wheels, rolled, solid forged
Standard Steel Works.....Philadelphia, Pa.

Wheels, steel tired
Standard Steel Works.....Philadelphia, Pa.

White Wash Brushes
Wolfe Brush Co.....Pittsburg, Pa.

Windmills
Canadian Fairbanks Co.....Montreal.
Ontario Wind Engine and Pump Co.....Toronto.

Window Fixtures
O. M. Edwards.....Syracuse, N.Y.

Wire and Wire Rope
Dominion Wire Rope Co.....Montreal.
The B. Greening Co.....Hamilton, Ont.
Mussens Limited.....Montreal.
The Wire and Cable Co.....Montreal.

Wire Cloth
The B. Greening Co.....Hamilton, Ont.

Wire, Copper
E. F Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Electric
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Insulated Copper
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Telegraph and Telephone
E. F. Phillips Electrical Works, Ltd....Montreal.
The Wire and Cable Co.....Montreal.

Wire, Transmission and Trolley
The Wire and Cable Co.....Montreal.

Wrecking Cranes
Mussens Limited.....Montreal.

Wrought Steel Piping
Canada Foundry Co.....Toronto.

Yachts
Polson Iron Works.....Toronto.

DOMINION CAR & FOUNDRY CO.

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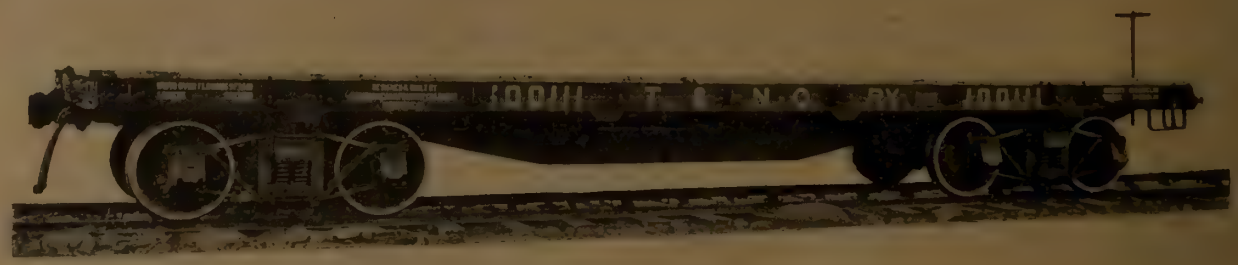

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